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John Wilkes Esq.re

A

TREATISE

OF THE

Education *and* Learning

Proper for the

Different Capacities of Youth.

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OF THE

Education *and* Learning

Proper for the

Different Capacities of Youth;

Founded on the

Principles of Natural Philoſophy:

Whereby all

Parents, Tutors, and Governors of YOUTH, may be informed what Sort of Learning beſt ſuits with each Genius:

By the due Obſervation whereof, they may be enabled to adapt the Studies of their Children and Pupils to their reſpective Capacities, and thereby lay a juſt Foundation for their future Fame and Fortune.

Principally extracted from the *Examen de Ingenios* of the famous *Spaniard* Dr. JOHN HUARTES: A Work ſo univerſally admir'd, that it has been tranſlated into *Latin*, and all the *Modern Languages*.

LONDON:

Printed for C. RIVINGTON, at the *Bible* and *Crown* in St. *Paul's* Churchyard; J. OSBORN, at the *Golden-Ball* in *Pater-Noſter-Row*, and J. LEAKE, at *Bath*.

M.DCC.XXXIV.

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THE PREFACE.

OUR principal View in the following Sheets, being to give an Abſtract of the moſt uſeful Parts of the celebrated Dr. *Huartes*'s *Examen de Ingenios*, accommodated to the Youth of our own Country and to the preſent Taſte, we ſhall have little to do in this Place, but to preſent our Readers with ſome Extracts from the Preface and Dedication to the *Engliſh* Edition of it, and from the Author's Epiſtle to the King of *Spain*; which give an ample Account of the Deſign and Uſefulneſs of the Piece.

With reſpect to our own Part of this Performance, it is neceſſary to obſerve, That we have been far from confining our ſelves cloſely to the Original; which, in many Places, is almoſt unintelligible, and too philoſophical for the middling Claſs of Parents and Tutors, and ſeems too abſtruſe to promote the Inſtruction of Youth in general; which are the principal Points we have had in View throughout the following Sheets: And therefore the Reader will not be ſurprized that we have brought ſeveral modern Inſtances, as Occaſion offer'd, to illuſtrate the Author's Obſervations, and that we have endeavour'd to make him familiar to the preſent Times and Manners. In particular we muſt obſerve, that we have omitted all thoſe Parts where the Author had run into phyſical Diſquiſitions, of too nice and delicate a Nature to be touch'd upon in a Piece calculated, as this is, for the Peruſal of Perſons of all Ages and both Sexes. And we have alſo frequently added ſeveral Particulars of our own, that ſeem'd naturally to fall in with the Author's Deſign, and capable of embelliſhing the Subject treated of.

As

As to the Original itſelf, there have been no leſs than Five or Six ſeveral Editions of it, Three of the *Italian*, Ten or Eleven of the *French*, into which it was at two ſeveral times tranſlated; as alſo Once into *Latin*, and Once into *Dutch*. If all this proclaims not its Merit, at leaſt it ſpeaks its good Fortune, in the kind Reception it has met with in the World. And we hope, that what we have done, with a View to make it more generally uſeful for all Sorts of Perſons, in which we have endeavour'd to retain the Author's Beauties, and only lopped off his Excreſcencies, will be thought an acceptable Service by all ſuch as know the Merit of the Piece.

It would be no ſmall Advantage to the Commonwealth of Learning in general, and to this Kingdom in particular, if an Attempt were made to put in Practice our Author's Scheme; for if there were *Triers* of Wit appointed by the State, according to his Propoſal, to watch the Genius of Children, in their firſt Appearances and Efforts, whether to make the Scrutiny as the Antients adviſed, by leading them to the Shops of Mechanicks, and to chuſe

Trades for them, according to the Tools they chuſe to play with, or to deſcend ſo far as to obſerve their childiſh Plays and Diverſions, wherein the Man is often repreſented in Miniature. Thus *Veſalius* began in his Childhood to cut up Rats and Mice; *Michael Angelo* to draw Figures, and *Galen* to make Medicines.

By theſe Means there would be fewer Dunces in the Univerſities, as well as fewer Bunglers in the Shops; not a few, upon ſuch Enquiry in the Schools and Inns of Court, would be ſent to take their Degrees in the Trades and Manual Arts; their *Bodies* being made for Labour, not their *Minds*; and their *Genius* ſuiting with ſuch Profeſſions, as rather require broad Shoulders and ſtrong Backs, than good Heads: Nor, upon Examination, would there be found fewer in the Shops, fit to fill the Places of many Graduates in the Univerſities. And thus by this mutual Tranſplantation, in the end, the Univerſities might be ſupplied with abler Profeſſors from the Shops, and the Shops again, in return, ſtored with better Artiſts from the Univerſities. Were this Care duly taken to prevent the miſmatching Men and Profeſſions, what ſurer and more effectual

way

way could be opened, for the Advancement of Learning, and the Flouriſhing of Trade at once?

It muſt indeed be confeſs'd, that the Difference of Studies ſeems not greater, than the Diverſity of Talents in Men that are framed for them: The *Genius* of a *Logician*, for Inſtance, lies not the ſame way with that of a good *Grammarian*, inſomuch that *Dulhard*, *Ludovicus Vives*'s Maſter, uſed to ſay, as his Scholar has told us, that the worſt *Grammarian* would make the beſt *Logician:* Nor are the Talents of a *Linguiſt* the ſame with thoſe of a *Mathematician*, as appeared in a Tryal of Skill between an eminent *Linguiſt* and a *Mathematician* of no leſs Name of our own, *Bryan Walton*, Biſhop of *Cheſter*, and Mr. *Oughtred*, who entred into a mutual Agreement that each ſhould teach the other his Skill. The Succeſs of which was no other than this, that tho' the Biſhop proceeded a great way in making Mr. *Oughtred* a good Oriental *Linguiſt*, yet ſo far was the other, in return, from being able to make the Biſhop a tolerable *Mathematician*, that he could never get him to maſter the plaineſt a Leſſon in *Euclid*. And we may add, that a late * *Italian* Author

* Bartolus.

takes notice of ſuch Studies as will not well aſſociate and match together; particularly theſe, *viz.* a * *Poetical Phyſician*, a *Philoſophical Hiſtorian*, a *Mathematical Civilian*, all which are, as he terms them, no leſs than Monſters in a Learned Academy.

Nor is the Diſproportion between ſeveral Arts greater or more viſible, than even the Diſparity between ſeveral Parts of the ſame Art, of which, to ſay no more, this may ſuffice for Inſtance, which hath been obſerv'd by Painters of Men of their own Profeſſion, that the greateſt Maſters in Colouring, have rarely or ever proved good Deſigners, and ſo on the contrary: Whether it be eaſier for Colours to meet and mingle, than to unite good Colouring and Deſign in the ſame Picture; or whether it be that Painters in this inherit the Fate of their own Colours, and that different Parts of their Employment will no more unite, than diſagreeing and unſociable Colours, we leave to others to enquire. This only we take leave to ſay, that nothing is more

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* *England* has produced lately ſeveral Genius's equally noted for Phyſick and fine Poetry; which will ſtand as ſo many Exceptions to this general Rule.

ordi-

ordinary than for that as well as other Profeſſions to abound with Pedants, and Men of narrow Spirits, whoſe Heads are filled with Images all of one Colour; whereas but few, very few! Univerſal *Genius*'s appear among the Sons of Men, who imitate the Light, which is alike Friendly and Impartial in the Viſits it makes, and the Colours it receives, diſdaining not to deſcend equally to every Eye, and to communicate indifferently with all Colours.

To the End, therefore, that the Works of all Artiſts may attain the utmoſt Pitch of Perfection, and be of the greateſt Uſe to the Common-Wealth, it ſeems very reaſonable that by a Law it ſhould be provided, that each Perſon ſhould ſtick cloſe to the Profeſſion moſt agreeable to his Talent, and let the reſt alone. For conſidering how limited the Wit of Man generally is to one thing, and no more; it will be moſtly found, that every Man who pretends to attain two different Arts, will certainly prove defective in one, if not in both of them. And accordingly, that none might err in the Choice of what is moſt agreeable to the Bent of his Natural Inclination, there ſhould be, as we have

hinted, *Triers* appointed by the State, Men of approved Sagacity and Knowledge, to ſearch and ſound the Abilities of Youth, and after due Search, to oblige them to the Study of that Science their Heads moſt incline to, inſtead of abandoning them to their own Choice By which Means Art and Nature being thus happily united, the moſt inimitable Artiſts in the World, as well as the moſt accompliſh'd Works, would proceed from this deſirable Union.

All the antient Philoſophers have found by Experience, that where Nature diſpoſes not a Man for Knowledge, 'tis in vain for him to labour to attain it by the Rules of Art. But not one of them has clearly and diſtinctly declar'd what that Nature is, which renders a Man fit for one, and unfit for another Science; nor what Difference of Wit is obſerved among Men; nor what Arts and Sciences are moſt ſuitable to each Man in particular; nor by what Marks they may be diſcern'd, which is of the greateſt Importance. Theſe four Points, however difficult, are treated of in the following Sheets, beſides many others, that collaterally fall in with this Doctrine, by which a curious Father may be enabled to judge how to apply to each of his Children the

the Science in which he ſhall moſt excel; which Method *Galen* reports his Father took with him, when a Child; for diſcovering in his Son a *Genius* adapted to Phyſick, he enjoined him to ſtudy that, and not to trouble himſelf about any other; conformable to a Law, in *Plato*, which required every one at *Athens* to apply himſelf to one Science only, and particularly to that moſt natural to his *Genius*, for this very Reaſon, that Man's Nature is not capable of exerciſing two Arts, nor of maſtering abſolutely two different Studies at once. And had *Baldus*, (that celebrated Lawyer) always ſtudied and practiſed Phyſick, as he began, he would have paſſed but for an Empirick, having no *Genius* for that Science, and the Law at the ſame time would have loſt one of its greateſt and moſt incomparable Interpreters.

The Natural Philoſophers are agreed, ſays *Huartes*, that all the Faculties with which an Act of Senſation is performed, ſhould be clear and pure from the Tinctures of the ſenſible Object; not to make quite different and abſolutely falſe Reports of the ſame. For Inſtance, let us ſuppoſe four Men defective in the Compoſition of the Organ of Sight, and that in one a Drop

of Blood ſhould be mixt with the Cryſtalline Humour, in the other a Drop of Choler, in the third one of Phlegm, and in the fourth one of Melancholy; if theſe know nothing of their Defects, we will lay before their Eyes a Piece of blue Cloth to judge of its true Colour; 'tis certain the firſt will ſay 'tis Scarlet, the ſecond that it is Yellow, the third that it is White, and the fourth that it is Black, and that each of them would make no Difficulty to ſwear it, and to ridicule his Companion upon it, as one that ſuffers himſelf to be deceived in a thing ſo clear: And if we ſhould let theſe four Drops of Humour fall down to the Tongue, and give to theſe four Perſons a Glaſs of Water to drink, one would ſay, it was ſweet; another, it was bitter; the third, it was ſalt; and the laſt, that it was ſowre. Thus we ſee here four different Judgments in two Qualities, becauſe each has his ſenſory Organs tinctured, not one of them all hitting upon the Truth. The ſame Reaſon and Proportion is kept by the Internal Faculties, in the Place of their Objects; and thus it would be ſhould we carry up thoſe four Humours even to the Brain; if they happened to cauſe an Inflammation there, we ſhould ſee a thouſand Sorts of Follies and Extravagances.

And

And indeed it must be own'd, that there are many Persons not incommoded with this distemper'd Excess, who seem at times to have a sound Judgment, and speak and do very rational Things; and yet, at other times, are very extravagant and unaccountable in other of their Actions: Such are perhaps the more incurable, because the calm and moderate Temperament they generally possess, hinders them from thinking that due Reflexion necessary, which might be productive of a more regular Conduct. And thus may we account for the distemper'd Actions of some Men, who seem in the general wise and discreet.

The great Philosopher *Democritus* indeed carried this Point further, including all Mankind, under the general Imputation of being mad or diseased. *Every Man*, says he, *from his Birth even to his Death, is but a Disease: When he is brought into the World, he is helpless, and wants the Aid of another: When he encreases in Strength, he becomes insolent, must be corrected, and have a Master: When he is at full Strength, he is rash: When he declines to Old Age, he is miserable, does nothing but vaunt and prate of his past Labours; at length he drops, with his fair Qualities, into the Ordure of his Mother's Belly.*

These

Theſe Words were admired by the great *Hippocrates*, who reliſhing a Treat of ſuch high Wiſdom, return'd to viſit him, and ask'd him why he laugh'd without ceaſing at all Mankind? To which he anſwer'd; *Don't you ſee that the whole World is raving mad in a burning Fever? Some buy and feed Kennels of Hounds that are to devour them: Others run mad after Hunting-Horſes: Theſe would command many People, and yet know not ſo much as how to govern themſelves: Thoſe burn with Love, take Wives to drive away Incontinence, and ſoon prove as irreconcilable in their Hatred to them; others languiſh with deſire to have Children, and when theſe Children are once grown up, they turn them out of Doors. All theſe unprofitable tranſient Cares and Afflictions, what are they but inconteſtable Tokens of conſummate Folly? Nor do Mankind ſtop here, for having no greater Enemy than Quiet, they wage War one with another; they depoſe their Kings, and advance others, perhaps much worſe, to their Dignities; they account it a Glory to murder one another, and turn their Swords againſt their own Mother's Breaſts; go on wickedly ſearching into the Bowels of the Earth, which adminiſters Matter to all their Crimes. In fine,* ſays he, *this World, to ſpeak properly, is but one great Bedlam, where every Man's Life*

Life is a ridiculous Comedy, which ſerves to make Sport for all the reſt; and this truly is the Subject of my Laughter. Whereupon *Hippocrates* cryed out aloud; Democritus *is no mad Man, but the wiſeſt of Men, and one that can make us all wiſer.*

'Tis to be obſerved however, to palliate the Affliction of the moſt miſerable among the Sons of Men, that no ill Conſtitution ever attends a Man, that debilitates him in one Faculty, but in the ſame Proportion ſtrengthens him in another; and in that even which requires a different Temperament: For Inſtance, if the Brain being well temper'd, ſhould happen by *Exceſs of Moiſture* to loſe its good Temperament, the Memory would aſſuredly prove more excellent, tho' the Underſtanding would be impair'd, as we ſhall hereafter make out: And if a Man loſes this good Temperament by too much *Dryneſs*, the Underſtanding will be thereby encreaſed, but the Memory diminiſh'd. So that as to what concerns the Operations relating to the Underſtanding, a Man that has a dry Brain, ſhall much more excel, than he that has a ſounder and more temperate one: And for the Operations of the Memory, a Man of a bad Conſtitution, thro' too much Moiſture,

Moiſture, in that excels a Man of the beſt Conſtitution in the World; for, according to the Opinion of Phyſicians, Men of the worſt Conſtitution, in many things ſurpaſs thoſe of the beſt. For which reaſon *Plato* ſaid, it was a Miracle to find a Man of an excellent Wit, that had not ſome Madneſs (as much as to ſay, a hot and dry Diſtemper of the Brain:) ſo that there is an intemperate Diſtemper appropriate to one ſort of Science, which is quite contrary to another. Therefore 'tis requiſite a Man ſhould diſtinguiſh what kind of Infirmity and Diſtemper his is, and what Science in particular it ſuits with, for in that Science he may diſcover Truth, but in the others he can only make Conjectures at random.

Men of harmonious Conſtitutions, as we ſhall hereafter prove, have in a degree of Mediocrity a Capacity for all Sciences, though they will never excel in any; but thoſe that are otherwiſe, are fit but for one only, which if they happen to hit upon, and ſtudy with Care and Application, they may be aſſured to ſucceed wonderfully in it; but if they fail in their Choice and Application, they will make but ſmall Advancements in the other Sciences.

ences. Hiſtory confirms to us, that each Science was diſcover'd by Men of general ill Conſtitutions.

If *Adam* and his Children had continued in the Terreſtrial Paradiſe, they would have had no occaſion for Mechanick Arts, nor any of the Sciences now taught in the Schools.

But no ſooner had he fallen, but he found it needful to have recourſe to Arts and Sciences to ſupport his Miſery. The firſt Science that appeared in the Earthly Paradiſe, was Skill of the Law, by means of which was form'd a Proceſs, with the ſame Order of Juſtice, as obſerv'd at this day, citing the Party, and declaring the Crime he was accuſed of, the Accuſed anſwering, and the Judge pronouncing Sentence.

The ſecond was Divinity; for when God ſaid to the Serpent, *And ſhe ſhall bruiſe thy Head*, *Adam* underſtood, as he was a Man whoſe Underſtanding was full of infus'd Sciences, that to repair his Fault, the Divine Word was to take Fleſh in the Virgin's Womb, who by her happy Delivery ſhould trample under her Feet the Serpent and

and all his Powers; by which Faith and Belief he was to be ſaved.

Next came Phyſick, becauſe *Adam* by Sin became Mortal and Corruptible, ſubject to an infinite Number of Infirmities.

All theſe Arts and Sciences were firſt exerciſed there, receiving afterwards their due Improvement and Perfection, by means of Men of Wit and Ability qualified for that Purpoſe.

From what has been ſaid then, reſult theſe three Concluſions, *viz.*

1. That of all the different Wits of Men, there is but one (as predominant) can fall to one Man's Share. Nature, indeed, ſometimes ſeems to ſtrain hard to form two or three Excellencies in ſome one Man; but, being unable to effect what ſhe deſigned, generally leaves him in a manner unfiniſh'd and in haſte, and he appears only a rude Eſſay, and imperfect Piece.

2. That to each different kind of Wit correſponds one Science only, and no more, in a tranſcendant Manner; for which reaſon, if

if a Man is not well assured in the Choice of what suits his Talent, he will find himself very defective in the rest, notwithstanding the most assiduous Application.

3. That after a Man has found out what Science corresponds best with his Wit, there remains, if he would not err, another greater Difficulty; which is, whether the *Practice* or *Theory* suits best with his *Genius*; for these two Parts (in all Sciences whatever) are so opposite to each other, and require Wits so diverse, that they may be set one against the other as Contraries. A hard Sentence this, and yet hard as it is, there lies no Writ of Error, or Appeal against it; for who can say he has received any Wrong?

There are Diversities of Gifts (says the Apostle, 1 *Cor.* xii.) *but the same Spirit. And there are Diversities of Administrations, but the same Lord: And there are Diversities of Operations, but it is the same God which worketh all in all; but the Manifestation of the Spirit is given to every Man to profit withal; for to one is given by the Spirit the Word of Wisdom; to another the Word of Knowledge, by the same Spirit; to another Faith, by the same Spirit; to another the Gift*

Gift of Healing, by the same Spirit; to another the Working of Miracles; to another Prophecy; to another the discerning of Spirits; to another divers kinds of Tongues; to another the Interpretation of Tongues: But all these worketh that one and the self-same Spirit; dividing to every Man severally as he will.

And it may be observ'd, That in the general System of Providence, with regard to the Government of this World, it has pleased God to create in all Mankind, to one another, and from the human Species down to the lowest Parts of the Creation, a necessary and mutual Dependence. And this is excellently observ'd, and beautifully set forth by a † Writer of our Day, in the following Verses.

God in the Nature *of each Being founds*
Its proper *Bliss, and sets its* proper *Bounds:*
But, as he fram'd a Whole, *the* Whole *to* (*bless,*
On mutual Wants, *built mutual* Happiness;

† Essay on Man, Part III.

So

So from the firſt Eternal ORDER ran,
And Creature link'd to Creature, Man to Man.

And in another Place,

—— *Parts relate to Whole,*
One All-extending, All-preſerving Soul
Connects all Being, greateſt *with the* leaſt,
Made Beaſt *in Aid of* Man, *and* Man *of* (Beaſt:
Each ſerv'd *and* ſerving; *nothing ſtands* (*alone:*
The Chain *holds on, and* where *it ends,* (*unknown.*

And thus may it be ſaid, That the loweſt Capacities among Men, may be equally uſeful in the Parts allotted them by Providence, with the higheſt: But how to ſuit theſe Parts properly to every Actor in this Scene of Life, is the Difficulty; and the principal View of the enſuing Pages.

A TREA-

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CHAP. I.

What Wit is, and what differences of it are ordinarily obſerv'd among men.

AS *wit* and *capacity* in men is the entire ſubject of this Book, it will be convenient, firſt, to underſtand the definition of *wit*, and what it eſſentially comprehends. We muſt know then, that the word *ingenium* in *Latin*, which ſignifies *wit*, is derived from one of theſe three words, *gigno, genero, ingenero,* as much as to ſay *ingender*; and it ſeems rather to come from the laſt, conſidering the ſound and number of letters and ſyllables it borrows thence, and what we ſhall hereafter add of its ſignification.

THE reaſon upon which the firſt inventers of this word built, is not trivial, but required much ſubtle ſpe-

culation, and strong natural philosophy; by which one may discover two generative powers in man, one common with the *beasts* and *plants*, and the other participating of spiritual substances, *God* and the *Angels*. It is our province to discourse of the first, which is well known, there being more difficulty in the second, because their birth, and manner of procreation, are not so manifest to all the world: nevertheless, speaking according to natural philosophers, 'tis a clear case, that *wit* is a *generative power*, and, if we may so say, becomes *pregnant*, and *brings forth*; and moreover, as *Plato* affirms, wants a midwife to *deliver* her. For in the same manner as the plant or animal in the generation of the first sort, gives a real and substantial being to what it produces, which it has not before generation; even so, *wit* has the Power and natural force to produce and bring forth within it self a Son, which the natural Philosophers call *NOTION*, or *Idea*, or, as it has been accounted, *the word of the spirit*. And not only these philosophers speak of it after this manner, maintaining the understanding to be a *generative faculty*, and calling that a *son* which it produces; but sacred writ it self, speaking of the generation of the eternal word, makes use of the same terms of *father* and *son*, or *ingender* and *bring forth*. *When there were no depths I was brought forth; when there were no fountains abounding with water; before the mountains were settled, before the hills, was I brought forth:* so also is it certain, that the divine word had its eternal generation from the prolifick understanding of the Father. *My heart (that is to say, my thoughts) hath indicted a good word:* And not only the divine word, but also all things comprehended in the universe, visible and invisible, have been produc'd by the self-same power. Whence the natural philosophers, considering the fecundity of the divine understanding, have named it *genius*, or the *engenderer*.

AND though the rational soul, and other spiritual substances, may be call'd *genii*, from being fruitful in the production of some thoughts relating to science, yet they have not always an intellect of sufficient power to give a real independent being to what they ingender: but, however,

'tis

'tis neceſſary, in order to draw a perfect idea by which we are to form ſuch thoughts, to make before-hand a thouſand ſtrokes, as it were, in the air, to build models, and in the end to ſet our hand to the work to give them the being they ought to have; and notwithſtanding all theſe eſſays, they happen for the moſt part to be defective.

THIS doctrine then being ſuppos'd, we muſt now underſtand, that the arts and ſciences men ſtudy, are only a ſort of images, and figures, begotten by their minds in their memory, which repreſent to the life the poſture and natural compoſition of the ſubject relating to the intended ſcience: as for inſtance, *phyſick* was nothing elſe in *Hippocrates* and *Galen*'s heads, but a picture, nakedly preſenting the ſtructure of the body of man, together with the cauſe and cure of his diſeaſes. The skill of the *law* is another figure, repreſenting the form of juſtice, which preſerves human ſociety, making man live in peace and tranquillity. Whence 'tis eaſy to perceive, that if a ſcholar under the conduct of an able maſter, cannot form in his memory ſuch another image, and as exact as that laid before his eyes, when he is diſcourſing to him of it, there is no doubt to be made, but he has a barren invention, and ſuch as will never be able to conceive, or bring forth any thing but extravagancies and monſters. And ſo much for the word *ingenium*, deriv'd, as we have ſaid, from the verb *ingenero*, as much as to ſay, *to engender within himſelf an entire and true figure, repreſenting to the life the nature of the ſubject intended to be ſtudied.*

CICERO defines *wit* after this manner, *docility and memory ordinarily call'd by the ſame name of* wit; wherein he has followed the opinion of the common people, who reſt contented, if their children are but docible, or eaſy to be inſtructed by another, and endu'd with a competent memory to retain and preſerve the figures conceived in the underſtanding: for which reaſon *Ariſtotle* ſaid, That the *ear* and the *memory* muſt be join'd to reap any advantage from the ſciences. But to ſpeak truth, *Cicero*'s definition is too ſhort, becauſe *docility* only imports ſuch wits as want a maſter, without including a great many inventive ones, whoſe felicity is ſuch, that,

aſſiſted by the ſubject only, without the help of any body, they produce a thouſand conceits they never heard ſpoke of; ſuch, for example, were thoſe who firſt found out the arts. In another place, *Tully* adds *memory* to the definition of *wit*, of which, however, *Galen* ſays, that it has no kind of *invention*; as much as to ſay, that it is unable of itſelf to engender any thing, for ſo much *Ariſtole* teaches us, that a ſtrong memory impedes the copiouſneſs of the underſtanding, as not being prompt to conceive, or bring forth, but ſeeming only to keep and preſerve the figures and ſpecies of what the other powers have conceived, as is obſerv'd of the learned, who have excellent memories, that they ſpeak and write nothing but what others have been the authors of.

'Tis true, if we conſider well the term *docility*, we ſhall find that *Cicero* has not been, in the main, unhappy in his definition; for *Ariſtotle* ſays, that prudence, wiſdom, and the truth of ſciences, are ſtow'd among natural things, there to be ſought after, as in their proper fountain. He that has ſharpneſs of underſtanding, and a good ear to diſtinguiſh what nature teaches and divulges in her works, ſhall wonderfully improve by the contemplation of natural things, and has no need of a maſter, to ſhew him what he may learn well enough from the brute beaſts and the plants. *Go, drone, take thy leſſon from the ant; conſider her toil, and become wiſe by her example; ſee how ſhe, without teacher or learning, lays up proviſion in the ſummer for the winter.* *Plato* took little notice of this *docility*, imagining, perhaps, there were no other maſters to inſtruct men, than thoſe mounted in chairs; which made him ſay, *The field and the trees can teach me nothing, but the converſation of men only in the city.* *Solomon* ſpoke better, when he begg'd of God the ability to govern his people: *Give, if thou pleaſeſt, O God, to thy ſervant judgment, that he may rule thy people, and diſtinguiſh between good and evil.* By which he ask'd only a clear and refin'd underſtanding, to the end that when doubts occurr'd to him in his government, he might derive from the nature of the thing the true judgment he ought to make of it, without going to ſeek it in books: and it could be nothing elſe but

but the nature of the thing that inform'd him, in the diſpute between the two women, which was the child's true mother, namely, ſhe who could not bear the divideing of it.

THE ſame kind of *docility* and clearneſs of underſtanding was given by Jeſus Chriſt to his diſciples, for their underſtanding the holy ſcriptures, after their natural dulneſs and indiſpoſition of mind was withdrawn, as it is ſaid, *He opened their underſtandings, that they might underſtand the ſcriptures.*

PLATO, ſpeaking of wits that were to learn the divine ſciences, ſays, *That they ought not only to make choice of bold men, that ſhould ſtrike a terror into their enemies, but alſo chiefly of thoſe to whom nature had been liberal in the gifts requiſite to divinity; that is to ſay, thoſe of a ſharp and ready wit.* By the way reprehending *Solon* for ſaying, this ſort of ſcience was to be ſtudied in old age.

THOSE that are maſters of ſuch qualifications, proceed in the ſtudies they are engaged in with very little labour; becauſe their underſtanding has nothing to do but to preſerve in their memory the figures and ſpecies that enable them, upon occaſion, to diſpute; thoſe natural things at all times, ſuggeſting to us ſuch ideas as we would frame to ourſelves in ſpeculation, and when they are ſupernatural, they need only to underſtand the ſpecies and figures that have paſs'd through their ſenſes: Which occaſioned *Plato* to ſay, *That we need not diveſt ſublime things of their matter, to make them ſenſible to us; for being in their nature moſt excellent and elevated, they are not ſuch as naked reaſon is ſo well able to comprehend.* For which reaſon he declares, that the greateſt wits were required for divine ſtudies, rather than any other, ſeeing they were above our reaſon. Whence 'tis certain, that that ſo fam'd maxim of *Ariſtotle*, *That there is nothing in the underſtanding, but what has paſs'd through the ſenſe*; has no place in the ſecond ſort of *docility*, but only in the firſt, in which the ability extends no farther than to receive and retain in the memory what the maſter teaches: Whence may be clearly collected, what an abuſe is committed in theſe days in

the ſtudy of theology, ſeeing that many perſons whom nature deſign'd to cultivate and till the earth, are very forward to thruſt themſelves into holy orders.

WITH theſe two ſorts of qualities of which we have treated, correſpond as many kinds of wit; *Ariſtotle* takes notice of the *firſt*, *He has true wit that acquieſces in, and aſſents to him that ſpeaks truth*, becauſe the man who remains not convinc'd by ſtrong and ſolid reaſons, and that forms not, in his memory, a good idea of what is propos'd to him, ſufficiently declares to us, that his underſtanding is ſhallow. 'Tis, indeed, worthy of obſervation, that many ſcholars very readily learn all their maſters teach them, retaining it in their memories, without any difficulty, which may happen, becauſe the maſter is of great ability, and ſuch a one as *Ariſtotle* deſcribed, when he ſaid, that it is requiſite for *a learned man not only to know all that may be drawn from principles, but alſo that he have a perfect knowledge of the principles themſelves.*

THOSE ſcholars that concur with ſuch a maſter, without doubt have an excellent wit; which they alſo further ſhew, when they receive and underſtand the doctrine of the maſter, without his ſubjoining his own opinions and concluſions, with the principles upon which they are founded.

THERE are other rude and groſs dunces, who perceiving the ſharper wits in more eſteem, very inconveniently, and for quite different reaſons, in imitation of the other, preſs their maſter with a thouſand impertinences, he not being ſo able to clear their doubts, as they are to diſcover their weakneſs: 'tis of them *Plato* ſays, *That they have not ſenſe enough to be convinc'd.* But he that has a nimble and ready wit, need not wholly rely on his maſter, nor ſwallow down any thing that appears not to be conſonant to his doctrine.

OTHERS are ſilent, and obey their maſter without the leaſt contradiction, becauſe they have not wit enough to diſcern the falſity and ill conſequence of his corollaries from the firſt principles.

ARISTOTLE has thus defin'd the *ſecond* difference of wit, *He has the moſt excellent wit, who of himſelf underſtands*

derſtands every thing: which kind of diſcerning wit, bears the ſame proportion with regard to knowledge and underſtanding, as human ſight does to forms and colours, when 'tis clear and penetrating. As ſoon as one opens his eyes, he diſtinguiſhes every thing, without another view or report; but if the ſight be ſhort and weak, the moſt apparent and cleareſt things in view cannot be diſcern'd, without borrowing the eyes of a third man, who repreſents them to him. An ingenious man, when he contemplates (that is to ſay, opens the eyes of his underſtanding) comprehends from the leaſt diſcourſe, the being of natural things, their difference, propriety, and to what end they were created; but if there be not ſo large a capacity, the maſter, of courſe, muſt take the more pains with him, and yet, even then, as 'tis frequent, all his labour and application are to no purpoſe.

THE generality of people are not acquainted with this difference of wit, imagining 'tis no where to be found; and, indeed, not without great ſhew of reaſon, as the ſame philoſopher has very well obſerv'd: *No Man ever came compleatly learned into the world, nor is there any natural knowledge amongſt men.* In effect, we ſee by experience, that all they who have ſtudied, even to this very day, have wanted a maſter. *Prodicus* was *Socrates*'s maſter, who by the oracle of *Apollo* was pronounc'd the wiſeſt man in the world; and *Socrates* taught *Plato*, whoſe wit was ſo extraordinary, that he deſerv'd the ſurname of divine: *Plato* was *Ariſtotle*'s maſter, of whom *Cicero* ſaid, *That he was the greateſt wit that ever was.* Now if this laſt difference of wit had been to be found in any, without doubt it would have been amongſt thoſe eminent perſons: ſeeing then not one of them had it, 'tis a ſtrong preſumption nature cannot give it us.

ADAM only himſelf, as the divines deliver, was born entirely inſtructed, and fill'd with the infus'd ſciences; and he 'twas, who communicated them to his ſucceſſors: from whence it may be concluded for certain, that there is nothing new, and that there is no opinion in any kind of ſcience, that has not been maintain'd by one or other; according to that ſaying, *There is nothing yet ſaid, that has not been ſaid before.*

To this 'tis anſwer'd, That *Ariſtotle* has defin'd a perfect wit, as it ought to be, rather than as it was; for he knew full well, there was none ſuch in nature. Even as *Tully* deſcrib'd a compleat orator, and own'd, 'twas impoſſible to find ſuch a one, but that he would be the beſt that approach'd neareſt to the idea he had drawn of one: 'tis the very ſame in this difference of wit; for though we cannot meet with ſuch a perfect one as *Ariſtotle* has fram'd, yet it muſt be granted, we have obſerv'd many perſons approach very near it, inventing and ſaying ſuch things as they never heard from their maſters, nor any mouth, and that have been able to diſcern and diſprove the errors they taught them; ae leaſt it cannot be denied of *Galen*, that he had this difference of wit, when he ſaid, *I have found out all things myſelf, having no other guide but the light only of my natural reaſon; whereas had I followed ſome maſters, I had fallen into a thouſand errors.* Now, though nature gave theſe very perſons a wit that had its riſe, increaſe, perfect ſtate, and declenſion, yet ſhe render'd them compleat at laſt, without doubt, though they arrived late at it, as *Ariſtotle* ſaid; but ſince ſhe gives it not but with theſe conditions, we need not be amazed if *Plato* and *Ariſtotle* ſtood in need of their maſters to inſtruct them.

THERE is a *third* difference of wit, which nevertheleſs is not abſolutely different from what I have but now treated of; by means of which, ſome have, without art or ſtudy, ſpoke ſuch ſurprizing things, and yet true, as were never before ſo much as thought of. *Plato* calls this ſort of wit, *An excellent wit, with a mixture of enthuſiaſm.* 'Tis the ſame, ſays he, which inſpires the poets with what is impoſſible for them to conceive, without divine revelation. Whereupon he adds, *Well may a poet be all in flames and raptures; his perſon being wholly ſacred, he can ſing nothing but what is full of God, who agitates him, tranſporting him beyond himſelf, and above his own reaſon: But as for thoſe of an unelevated ſpirit, they can never make moving verſes, nor prevail in propheſy. It is not then from any human art poets chaunt ſuch*

ſuch fine things, that thou, O Homer, *breatheſt, but rather from tranſports divine.*

THIS third difference of wit adjuſted by *Plato*, is actually found among men: but to aſſert, that what ſuch perſons ſay, is by divine revelation, would be an apparent and manifeſt abuſe, and ill-becoming ſo great a philoſopher as *Plato*; and is to have recourſe to univerſal cauſes, without having before-hand made an exact enquiry into particulars. *Ariſtotle* did better, who being curious to know the reaſon of thoſe wonderful things pronounc'd in his time by the *Sibyls*, ſaid, *That it came not to paſs by diſtemper, nor by divine inſpiration, but only by a natural ill-temperament:* the cauſe whereof is evident in natural philoſophy; for all the governing faculties in man, the *natural*, the *vital*, the *animal*, and even the *rational*, require each their particular temperament to perform their functions as they ought, without prejudicing, or interfering one with another. The natural virtue, as digeſtive of the food in the ſtomach, muſt have a due heat; that which gives appetite, cold; the retentive, dryneſs; and the expulſive, of what is nauſeous or ſuperfluous, a due moiſture. Whichſoever of theſe faculties poſſeſſes in a greater degree any of the four qualities by which it operates, will thereby become more powerful in that point, but not without impairing the reſt; becauſe, in effect, it ſeems impoſſible that all the four virtues and faculties, ſhould be aſſembled in one and the ſame place; ſince if that which requires ſome heat, becomes more potent, the other that operates by cold, cannot but be found more weak: which made *Galen* ſay, *That a hot ſtomach digeſted much, yet had a bad appetite; that a cold ſtomach digeſted ill, but had a good one.* The ſame thing happens in the ſenſes, and motions, which are operations of the animal faculty. Great ſtrength of body ſhews abundance of earthineſs in the nerves and muſcles; for if thoſe parts are not ſinewy, hard and dry, they cannot act ſteadily: on the contrary, to have a quick and lively ſenſe, is a ſign the nerves are compos'd of more airy, fine, and delicate parts; and that their temperament is hot and moiſt. How is it then poſſible that the ſame

nerves should have the temperament and natural composition which is required for motion and for sense, at one and the same time, seeing that for these two things, there must be quite contrary qualities? Which is clear'd from experience; for whereas a man that is very robust of body, has infallibly the sense of touching rude and gross, so when that sense is very exquisite, he is faint and languid.

THE rational powers, memory, imagination, and understanding are under the same rules. The memory, to be good and tenacious, requires some moisture, and that the brain be of a gross substance, as we shall prove hereafter: on the contrary, the understanding must have a dry brain, compos'd of very subtile and delicate parts. The memory then proceeding to a pitch, the understanding must necessarily be lower'd and diminish'd as much. But be it as it will, I beg the curious reader to reflect upon all the men he has known endued with an excellent memory, and I am assur'd he'll find, as to the operations belonging to the understanding, they are in a manner undiscernable.

THE same happens, as to the imagination, when it exerts its self; for as to the operations relating to it, it produceth prodigious conceptions, and such as astonished *Plato:* and when a man, endued with such an imagination, comes to concern himself in acting with understanding, one may, without doing him any injury, bind him as a lunatick.

WHENCE may be concluded, that the wisdom of man must be moderate, well-tempered, and equal; as *Galen* esteems those the wisest men that are well-temper'd, because, *they are not, as it were, intoxicated with too much wisdom.*

DEMOCRITUS was one of the greatest natural and moral philosophers of his time, who arrived at so great a perfection of understanding in his old age, that he entirely lost his imagination, insomuch, that he both said and did things so extraordinary, that the whole city of *Abdera* took him for a natural; and accordingly dispatch'd a courier to the isle of *Coa*, where *Hippocrates* liv'd, to entreat him earnestly, with offers of rich presents,

to

to come immediately to cure *Democritus*, who had loſt all his ſenſes: which *Hippocrates* readily complied with, as being curious to ſee and confer with the man, of whoſe admirable wiſdom he had heard ſo much noiſe. He departed that very inſtant, and being arrived at the place of his abode, which was a deſart, where he lived on a plain, he fell to diſcourſe him; and upon asking him queſtions, in order to diſcover the defects of his rational faculty, found him the wiſeſt man in the world; and told them that had brought him thither, That they themſelves were fools, and void of ſenſe, for having given ſo raſh a judgment of ſo diſcreet a perſon; for, as good fortune would have it for *Democritus*, the matters treated on with *Hippocrates*, at that time, appertain'd to the underſtanding, and not to the imagination, which was diſabled.

CHAP. II.

The differences amongſt men unqualified for ſcience.

ONE of the greateſt indignities that can be offer'd in words, to a man arrived at years of diſcretion, is, ſaid *Ariſtotle*, to accuſe him of want of wit; by which alone, he diſtinguiſhes himſelf from the brutes, and approaches near to God, and which is the greateſt glory that can be obtained by human nature. On the contrary, he that is born a blockhead, is incapable of any ſort of literature; and where there is no wiſdom, there, ſays *Plato*, can neither be true honour, nor good fortune; inſomuch, as the wiſe man declared, *The fool is born to his own ſhame*, ſeeing he muſt neceſſarily be degraded to the inferior animals, and be looked upon as one of the herd, although he enjoy other advantages, as well thoſe of nature as fortune, in being handſome, noble,

rich, high-born, and raiſed even to the dignity of an emperor.

IT behoves all men that have the care of youth, to attend diligently to their reſpective capacities, and to urge them only to ſuitable ſtudies and applications. 'Tis certain, that learning and ſciences do not more embelliſh a genius proper for their culture and reception, than they expoſe him that by nature is a blockhead: ſo true is the ſaying, *Learning is a ſnare to the feet of the fool, and as manacles to his right hands.* This may be clearly ſeen in univerſity ſcholars, amongſt whom, ſome may be found that learn more in the firſt year than in the ſecond, and in the ſecond more than in the third: Whence came the ſaying, In the firſt year, they are *Doctors*; in the ſecond, *Licentiates*; in the third, *Batchelors*; and in the fourth, *Ignoramus*'s; and the reaſon of it is, as the wiſeman ſaid, *The precepts and rules of arts are but fetters for inſipids.* I ſhall therefore exhort my readers, as I hinted before, to ſtudy well what ſort of wit and ability falls to the ſhare of thoſe whoſe education may be under their direction, that they may ſuit their manner of life and ſtudy thereto, for 'tis certain that there is no man, how groſs and imperfect ſoever formed, but nature has deſigned him for ſomething; and he that will make but a deſpicable figure among the *Literati*, may ſhine in ſome parts of mechanicks, or husbandry, or perhaps, thro' his induſtry, and frugality, in mercantile affairs, may one day be able to ſerve the common-wealth one way, which he could never be of uſe to another.

TO come to the matter in hand: To the *three kinds* of *wit* propos'd in the foregoing chapter, correſpond *three* reſpective *kinds* of *diſability*. There are ſome men whoſe ſouls are ſo immers'd in matter, and clogg'd with the qualities of the body that oppreſs the rational faculty, that they are eternally incapable of conceiving or acting any thing relating to learning and knowledge. The diſability of theſe people, very much reſembles that of eunuchs; having diſabled underſtandings, cold and malefic, if one may ſo ſay, without natural heat or vigor to produce the leaſt thought of learning; theſe never arrive ſo much

much as at the firſt principles of arts, and are unable to form an idea of them in their minds; from whence we may ſtrongly conclude them wholly incapable of the ſciences, and that the gate through which they ſhould paſs, is compleatly barr'd, ſo that they need not break their brains to ſtudy, for neither the laſh of the rod, nor method, nor examples, nor time, nor experience, nor any thing in nature, can ſufficiently excite them to bring forth any thing. The men of this incapacity differ very little from brute beaſts; they are always drowſy, nor ſeem they ever to awake; of ſuch the wiſe-man ſpeaks, *To ſet the treaſures of wiſdom before the eyes of a fool, is as ſpeaking to a man in a ſound ſleep:* The compariſon is very juſt and proper, becauſe *ſleep* and *ſtupidity* proceed alike from the ſame principles, that is to ſay, the great coldneſs and exceeding moiſture of the brain.

THERE is another kind of incapacity in wit, not quite ſo ſtupid as the former, becauſe, at leaſt, they conceive the firſt principles; and draw concluſions thence, tho' few, and not without much pains: but the impreſſion of them remains in their memories no longer than their maſters are talking to them, and making them underſtand the ſame by examples and methods of teaching agreeable to their rude and groſs underſtandings. They reſemble ſome women, who being big with child, are delivered, but the child dies as ſoon as it is born. Theſe mens brains are full of a flegmatic moiſture, for which cauſe the ideas finding nothing oily, or viſcous, neither ſtick nor are pliant; wherefore to teach them, would be to draw water with a ſieve. *A fool's heart and mind are like a bottomleſs veſſel, pour in what precepts of wiſdom you pleaſe, none will remain there.*

THERE is a *third* ſort of diſability very common among men of letters, who have ſome ſmattering of wit; for they take the firſt notions, and draw thence their concluſions, with which they overcharge and load their memory, but when they ſhould range every thing in order, commit a thouſand blunders. There is found ſo great a confuſion of the figures in the memory of this *third* ſort of inſipids, that when they would be underſtood, they have no leſs than an hundred ways of

ſpeaking

ſpeaking to expreſs themſelves, becauſe they have conceiv'd an infinity of things, altogether undigeſted, and without order or connexion of parts. Theſe, in the ſchools, are call'd *confus'd*, whoſe brains are unequal, as well in ſubſtance as temperament; in ſome places compos'd of delicate parts, and in others of groſs, and ill-temper'd; and becauſe it is alſo various and un-uniform, ſometimes they ſpeak witty and notable things, and immediately after fall into a thouſand impertinences: of theſe it is ſaid, *A fool's wiſdom in his brains, is like a houſe in ruins; his knowledge wants words to expreſs it ſelf.*

NAY, I have obſerv'd a *fourth* defect amongſt men of letters, which is not altogether incapacity, and yet they have not wit enough; for I find they that poſſeſs it, take learning, retain it firmly in their memory, fix the forms with the correſpondence they ought to have, ſpeaking and acting very well when there is occaſion for it; but if one ſounds them, and ſhould ask the eſſential cauſes of what they know and underſtand, they are eaſily found to have no bottom, and that all their ſufficiency was but a faculty to comprehend the terms and axioms of the doctrine they were taught, without penetrating how, or why it was ſo. *Ariſtotle* ſaid of theſe, *That there are ſome men who ſpeak, as it were, by natural inſtinct, and ſay more than they know, or conſider, after the manner of inanimate beings, who fail not to act very well, although they are as inſenſible of the effects they produce, as the fire of what it burns; and the cauſe of this is, nature leads them, ſo that they cannot fail of attaining their end.* *Ariſtotle* might well have compar'd them to ſome animals, who ſeem to perform all their actions with a ſhew of reaſon and deſign; but he ſuppoſing theſe animals had, at leaſt, ſome kind of knowledge of what they did, paſs'd to inanimate agents, becauſe, in his opinion, theſe though not wiſe, and wanting wit, yet operated, and very well too, without being able to diſtinguiſh the effect from the ultimate cauſe. This difference of incapacity, or, if you pleaſe, of wit, might be fully made out, if, without offence to any, I were permitted to point to the perſons; for I have both ſeen and known many ſuch.

CHAP.

CHAP. III.

The child who has neither wit nor ability requiſite to the intended ſcience, cannot prove a great proficient, though he have the beſt maſters, many books, and ſhould labour at it all the days of his life.

CICERO, in order to accompliſh his ſon *Marcus* in that ſort of learning he had made choice of for him, thought it would be ſufficient to ſend him to an academy ſo famous throughout the world, as that of *Athens*, to place him under ſo great a maſter as *Cratippus*, one of the moſt celebrated philoſophers of the age, and in a city, which, by the vaſt concourſe of people of all nations met together, muſt unavoidably furniſh him with a multitude of great examples, and novel accidents, that would experimentally inſtruct him, in his deſigned ſtudies; yet, notwithſtanding all the beſt methods an indulgent father could take (buying ſome, and writing other books for him) hiſtory informs us that he prov'd a meer blockhead, equally deſtitute of eloquence and philoſophy (nature being often even with the ſon, for her prodigality to the father): and, indeed, that great orator was miſtaken, in imagining that the induſtry of ſuch a maſter, the beſt books, the moſt refin'd converſation of that famous town, and an unwearied application of mind, together with time ſufficient to build his hopes upon, could ſupply the defects of a ſoul naturally incapable both of eloquence and philoſophy. At length, we find he was diſappointed, which is the leſs to be wonder'd at, being miſled by innumerable inſtances that flatter'd him with the like change in the diſpoſition of his

his ſon. Nay, he himſelf acquaints us, That *Xenocrates* had no genius for the ſtudy of natural and moral philoſophy, (for *Plato* uſed to call him his *hopeleſs ſcholar*) yet the indefatigable diligence of the tutor, and continued endeavours of the pupil, produc'd an excellent philoſopher. He ſays alſo of *Cleanthes*, that he was ſo ſtupid, that no maſter would admit him to his ſchool, which ſhamed the youth to ſuch a degree, that by an aſſiduous application, he acquired the greateſt reputation for knowledge. Nor were there the leaſt hopes that *Demoſthenes* ſhould ever ſucceed in eloquence, who, as authors affirm, was almoſt a man before he could ſpeak; yet, thro' his own unwearied labours, and the aſſiſtance of good maſters, he became the greateſt orator in the world. And *Tully*, amongſt other things, recounts, that he had ſuch an impediment in his ſpeech, that he could not pronounce the letter *R*; yet, by his addreſs, he ſo happily overcame it, that it was impoſſible to diſcern his former defect; which gave birth to the ſaying, *That human capacity for ſtudies, reſembles a game at tables, where, if the dice run croſs, the gameſter muſt ſupply the want of fortune with his better play.* But, according to my principles, the anſwer is ready to all *Cicero*'s examples. For, as I ſhall prove hereafter, a ſlow wit in children, promiſes a happier progreſs in their riper age, more than an early acute wit; as a pregnant infancy preſages a declining manhood. Had *Cicero* been acquainted with the genuine ſigns which diſcover a *genius* in the firſt age, he would have found, that *Demoſthenes*'s ſtammering, and *Xenocrates*'s dulneſs, were happy indications of a future ability. For, not to rob good maſters of the reward of their induſtry and fatigue, in cultivating rude, as well as docile tempers, yet, if the youth has not a pregnant intellect ſuſceptible of proper rules and precepts appropriated to the art he ſtudies, even the *Roman* orator's diligent care of his ſon, as alſo all the prudence of the beſt of fathers, prove vain and fruitleſs. Sciences are, in a manner, natural to thoſe only that have proper wits; and maſters have no more to do with their ſcholars, as I take it, than to open the way to learning; for if they have good inventions, by

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theſe alone they may attain great perfection; otherwiſe they do but vex themſelves and their teachers, and will never arrive at what they pretend to. For, were I myſelf a maſter, before I received any ſcholar to my ſchool, I would ſift him narrowly, to find out, if I could, what kind of *genius* he had; and if I diſcover'd in him a propenſity for learning, I would chearfully receive him; but if I found he was not in the leaſt capable of any learning, I would adviſe him to waſte no more time, nor loſe any more pains, but ſeek out ſome other way to live, that required not ſuch abilities as learning does.

EXPERIENCE exactly agrees with this, for we ſee a great many ſcholars enter upon the ſtudy of each ſcience, let the maſter be good or bad, and in the concluſion, ſome attain to great learning, others to indifferent, and the reſt have done nothing throughout their whole courſe, but loſt their time, ſpent their money, and beat their brains to no purpoſe.

THE difficulty of accounting for this, would not be great, if we duly reflected, that thoſe who are unapt for one, are fit for another ſcience; and that the moſt ingenious in one ſort of learning, proceeding to another, make nothing of it. I myſelf can atteſt the truth of this; for, there were three ſchool-fellows of us, that were ſet at the ſame time to learn *Latin*; one took it very readily, the other two could never ſo much as make a tolerable oration. However, all three fell upon *Logic*; and one that could make no hand of *Grammar*, eagle-like, penetrated into that art, whereas the other two could not advance the leaſt ſtep therein during the whole courſe. But then again, all three paſſing to the ſtudy of *Aſtronomy*, a thing very obſervable, he that could neither learn *Latin* nor *Logic*, in a few days ſpace underſtood *Aſtronomy* better than the maſter that taught him, of which the other two could underſtand nothing. This was a convincing proof, that each ſcience requires a particular and proper *genius*, which being diverted from that, is inſignificant in any other. Admitting this to be true, as no doubt it is, whoever ſhould at this time of day, go into any of our colleges, to ſound and examine the abilities of the youth there, he would find

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reaſon to move many from one ſcience to another, while great numbers of others he would be forced to turn out of doors for dunces, and put others in their places, whoſe narrow fortunes have condemn'd them to ſome mechanick trade, tho' by nature, better qualified for learning.

THIS being the caſe, it is convenient, before the child be ſent to ſchool, to ſound his inclination, and the natural tendency of his ſenſes, in order to find out what ſtudy is moſt agreeable to his capacity, that he may wholly apply himſelf to that. We muſt conſider likewiſe, that there are other qualifications no leſs neceſſary than a natural diſpoſition to make a learned man. Therefore *Hippocrates* ſaid, That wit in man may hold ſome proportion with the earth, and the ſeed ſown in it; for though the ſoil of itſelf prove fertile and fat, nevertheleſs it muſt be manured, and care taken what ſort of ſeed is moſt natural to it, for all land is not alike fit for all ſorts of grain; ſome bearing better wheat than barley, other better barley than wheat; and of the ſame earth, ſome parts are obſerved to bring forth brighter and plumper grain than others: nor is this all that a good husband-man is to do, for, after he has till'd the ground in due ſeaſon, he waits the proper ſeed-time, which is not to be expected at all parts of the year; and the corn being grown, he clears it of the weeds, that it may multiply and thrive, to produce the expected fruit. So likewiſe it is requiſite the ſcience moſt natural to the man being known, that he ſhould be ſet to the ſtudy of it in his childhood, which is the fitteſt time to learn. Beſides, as the life of man is ſhort, and arts tedious and toilſome, it is the more neceſſary to allot time enough for the attainment and exerciſe of them. The memory of children, ſays *Ariſtotle*, reſembles a blank paper, and being but young and tender, is capable of any impreſſion; not like that of grown men, which being ſtuffed with a multitude of objects they have ſeen in the long courſe of their life, is not ſo capable of receiving new ones. *For this very reaſon, ſays Plato, in the preſence of our children, we ought never to talk of any thing but true ſtories and good*

good actions, which may excite them to virtue, for whatever they learn at that age, they will never forget.

WHOEVER therefore would learn *Latin*, or any other language, ought to do it in his *tender age*, for if he ſtays till he arrives at a confirm'd maturity, he will never ſucceed.

IN the ſecond part of man's age, which is *youth*, ſome pains ſhould be taken in the art of ſyllogiſms, for then the underſtanding begins to diſcover itſelf; and being inured to the rules and precepts of logic, falls inſenſibly into more familiar methods of diſcourſing and arguing in the ſciences and diſputations.

MANHOOD comes next, when all the ſpeculative ſciences may be learn'd, for then the underſtanding is mature. It is true, *Ariſtotle*, with ſome juſtice, excepts natural philoſophy; alledging, that a young man is not ſufficiently qualified for that ſtudy, becauſe that is a ſcience of higher conſideration, and therefore requires a ſtronger judgment than any other.

THE age adapted for ſciences being known, a proper place to learn them in ſhould be forthwith ſought after, where they teach nothing elſe, as at the academies; for the youth muſt be removed from his father's houſe, becauſe the fondneſs of his relations and friends are great impediments to ſtudy. Which is very viſible in ſuch ſcholars as are natives of thoſe cities and places where univerſities are ſeated, very few of whom ever prove learned. But this might be eaſily remedied, by ſending the natives of *Oxford* to ſtudy in *Cambridge*, and thoſe of *Cambridge* to *Oxford*. To abandon one's native place to be made wiſer and worthier, is of ſuch importance, that no maſter in the world can teach one a more uſeful leſſon.

THE third caution is, to find out a maſter of a clear head, and good method in teaching, of ſolid and ſound learning, without ſophiſtry or trifling; for all that the ſcholar has to do during the time he learns, is to receive all the maſter propounds, becauſe he has neither wit nor diſcretion ſufficient, at the tender years which is neceſſary for him to be initiated into learning, to diſcern or diſtinguiſh between right and wrong.

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THE fourth conſideration to be made uſe of, is, to ſtudy the ſcience with *order*, beginning at its very *principles*, paſſing through the middle to the end, not making thoſe firſt principles, which preſuppoſe others. For this reaſon, it was ever eſteemed a fault to hear ſeveral lectures on divers ſubjects, and to carry them home promiſcuouſly; leaving, by this means, ſuch a medly of things on the mind, that when they come to be put in practice, a man can have no recourſe to the precepts of this art, becauſe they are not in any convenient order: It is much better to take ſome pains in each diſtinct ſtudy, in a method moſt natural to its inſtitution, becauſe the ſame way it is acquir'd, it will be ſtill retain'd in the memory. And more particularly it is neceſſary this be obſerv'd by ſuch as have naturally a confus'd underſtanding, which may be eaſily remedied, by hearing one thing at once, and that being over, to proceed to another, and ſo till the whole art be run through. *Galen*, well knowing of what importance it was to ſtudy the matter with method and order, writ a book on purpoſe to direct the method which ought to be obſerv'd in reading his works, to the end the phyſician might not be confounded. To this others add, That a ſcholar, in learning, ſhould never have more than one book, in which is clearly contain'd the point he ſtudies, and apply himſelf to that alone, and not to many, leſt he ſhould be confounded and perplex'd; and ſo far they are in the right.

THE laſt thing that makes a very learned man, is to ſpend much time in ſtudy, to wait patiently its digeſtion, and to allow it good ſettlement; for even as the body is not nouriſhed by the quantity of what we eat or drink in a day, ſo much as by the quality of it, when it is aſſimilated and digeſted by the ſtomach; ſo our underſtanding is not improv'd by the great deal we read in a ſhort time, but by what we underſtand by little and little, and pauſe upon between whiles. Wit, like plant, animal, and man, has its ſeveral ſtages, that is to ſay, its beginning, progreſſion, perfect ſtate, and declenſion: It ſprings in childhood, grows up in adoleſcency, comes to a conſiſtence in the middle-age, and declines

declines in old age. So that he, who would know when his underſtanding is at the pitch of perfection, may be aſſur'd 'tis between thirty-three, and the end of fifty years, more or leſs. And whoever would write books, ſhould do it at that very age, not ſooner, or later, unleſs he would eat his words, or change his opinion.

HOWEVER the age of man holds not in all people the ſame meaſure and proportion; for in ſome, childhood draws to a period in the twelfth; in others, not till the fourteenth; in ſome, it determines the ſixteenth; and in the reſt, not till the eighteenth year. Theſe live long, becauſe their youth reaches to little leſs than forty; and their manhood holds on to ſixty years. Beſides which, they have twenty years of old age; whence their thread ſtretches to eighty; which is the uſual limit of the healthieſt. The firſt that finiſh their childhood at twelve years, are very ſhort-liv'd, begin early to diſcourſe, their beard comes ſoon, and their wit laſts but a little time; theſe ordinarily decline at thirty-five, and end their days at eight and forty years.

THERE is not one of all the qualifications already mention'd, but what is very neceſſary, uſeful, and convenient to be obſerved, that the young ſtudent may come to ſomething; but above all, to poſſeſs a *genius* ſuitable to the ſcience he is to ſtudy. For, with this, we have obſerv'd, that many men who have begun to ſtudy in a far-ſpent age; nay, though they have met with bad maſters, an ill method, and ſtudied in their native country; yet, notwithſtanding all theſe diſadvantages, have, in a ſhort time, prov'd very learned men. *Baldus* is an excellent inſtance of the truth of this obſervation; who coming to ſtudy the law in his old age, was laughed at, and told, *Sero venis, Balde, in alio ſeculo eris advocatus:* yet, having a *genius* adapted to that ſtudy, he proved, in a ſhort time, a very extraordinary lawyer. *Nature*, ſays *Hippocrates, is the moſt neceſſary condition of all, by aſſiſtance of which, thoſe that apply themſelves to arts, penetrate throughly.* No man confirms the truth of this better than *Tully*, who full of grief to ſee that nothing could make his ſon a ſcholar, expreſs'd himſelf after this manner, *To ſtrive againſt nature,*

ture, what is it but giant-like to make war with the gods? As if he would have said, what more resembles the giants war with heaven, than for an insipid to set up for a man of parts? For, like as the giants never conquer'd the gods, but were always baffled by them, even so empty pretenders to learning, that strive against nature, will, in the end, have the worst of it. And the same author advises us not to offer violence to nature, nor attempt to be orators in spite of her, for it will be but lost labour. This leads me to inquire what that nature is, which qualifies a man for learning.

CHAP. IV.

That nature only qualifies a man for learning.

IT is a common saying, and much used by the ancient philosophers, That nature qualifies man for learning: art with its rules and precepts facilitates, but use and experience of particulars gains the mastery. But no man has yet declared what this nature is, nor in what class of causes it ought to be rank'd; they only affirm, *Whosoever pretends to learning, and wants that alone, arts, experience, masters, books, and industry prove all in vain.* There is a great contest between the natural philosophers, and the vulgar, about assigning the cause of this effect: The vulgar observing a man of great abilities, immediately declare God to be the author of them, without giving themselves any further trouble; and with good reason, because, in effect, *every good and perfect gift cometh from above.* There is no natural cause, say the philosophers, can produce effects arm'd with such force and energy as God: So far they are all agreed, that the first cause heats more than fire, refreshes more than

than water, illuminates more than the ſun himſelf, and in our particular formation, 'tis that which preſides over nature, and that diſpenſes or denies wit to men. Which conſideration made the royal prophet cry out, *Thy hands have made me and faſhioned me; give me underſtanding that I may learn thy commandments.* A natural philoſopher being in diſcourſe one day with a grammarian, a curious gardener came up to them, and asked them, What was the reaſon, that having taken ſuch pains with the earth, to dig, to ſift, to cleanſe, and dung it, yet it never brought forth ſo good ſeed as he ſow'd; whereas the plants it produc'd of its own accord, grew up with a great deal of eaſe? The grammarian anſwer'd, it came to paſs by the divine providence, which had ſo diſpos'd it, for the good government of the world. But the natural philoſopher fell a laughing at that anſwer, ſeeing he had recourſe to God, as being ignorant of the connexion of natural cauſes, and in what manner their effects are produced. The other ſeeing him laugh, ask'd him, if he ridicul'd him? The philoſopher anſwer'd, It was not him, but the maſter that had taught him no better; for the gardener's queſtion was natural, ſeeing the plants the earth produces of her ſelf, come out of her own bowels; and thoſe the gardener raiſes, are forc'd by art, and are the daughters of a ſtrange mother; and therefore, like an unkind ſtep-mother, ſhe communicates not to them the virtue and nouriſhment that ſhould make them thrive.

HIPPOCRATES confirm'd this in the viſit he made to the great philoſopher *Democritus*, who acquainted him with the falſe notions the people had of phyſick, who had nothing in their mouths, but that God had healed them, and if it had not pleaſed him, the phyſician's care and skill had been all employed to no purpoſe, and the like. This is the old way of talking, and which has ſo often been in vain exploded by the naturaliſts, that it is not worth while to endeavour to ſilence it; neither is it altogether convenient, becauſe the vulgar, who are not acquainted with the particular cauſes of any effect whatever, anſwer better, and with more truth, from the univerſal cauſe, which is God, than

than to run into impertinences. But let us talk at what rate we please, God is always understood to be the author, even of nature; for when *Aristotle* said, *God and nature make nothing in vain*, he never meant that nature was an universal cause, having a power independent upon God, but a name only of that order and subordinate rule appointed by God himself in the creation of the world, to the end that such effects might duly succeed, as were necessary to its conservation and continuance in the same state; for the natural order of the universe, by us called nature, from the creation to this day, has suffer'd no change or alteration in the least; for God made it with so much wisdom and prudence, that not to continue constant in that order, would be tacitly to lay a blame upon his works.

BUT as what we have said on this head, is too loose and confus'd a signification of nature, we will endeavour to find out another meaning of this word, which may be more accommodated to our purpose.

ARISTOTLE, and all other natural philosophers, were more particular, calling nature, every substantial form that gives being to a thing, and is the principle of all its operations. In which sense, our rational soul, with good reason, is call'd nature, for from thence we receive the form and being we have of men, and the same is the principle of all our actions; for all rational souls are of equal perfection, as well the wise man's as the fool's, and so we may not pronounce, that it is nature, in this sense, makes a man witty; for if that were true, all men would be equal in wit and capacity, and thereupon the same *Aristotle* found out another signification of nature, importing the reason and cause of a man's being capable or incapable; saying, that the temperament of the four first qualities (heat, cold, moisture, and dryness) were to be call'd nature, inasmuch as from them proceed all the abilities of men, all the virtues and vices, and all the great variety of wit we discover in the world. And he proves it clearly, by considering the several parts of the age of the wisest man, who, in his childhood, is little more than a brute beast, employing no other powers than the irascible and concupiscible; when youth

youth comes, he betrays an admirable wit, which we ſee continues to a certain period, and no longer; for old age drawing on, his wit every day declines, till in the end it is wholly loſt. Aſſuredly the diverſity of wit proceeds not from the rational ſoul, for that in all ages is the ſame, without ſuffering any alteration in its vigor or ſubſtance, except a man in the ſeveral ſtages of his life changes his conſtitution, or has a different diſpoſition; and from hence is it that the ſoul acts one part in childhood, another in youth, and yet another in old age; whence may be drawn an evident argument, that ſeeing the ſame ſoul performs contrary acts in one and the ſame body, by having in each diviſion of age, a different temperament; whenſoever of two boys, the one is witty, the other a dunce, the ſame happens by each having a different temperament from the other, which (being the principle of all the operations of a reaſonable ſoul) is by phyſicians and philoſophers call'd Nature; in which ſenſe this ſaying, *Nature makes able*, is properly verified. In confirmation of which doctrine, *Galen* wrote a book, proving, that the operations of the ſoul were influenc'd by the temperament of the body, in which it dwelt; and that by reaſon either of heat, cold, moiſture, and drineſs of the climate where they lived, or the qualities of the meat they eat, and of the waters they drank, and of the air they breathed in, ſome were fools and others wiſe; ſome ſtout and others cowards; ſome cruel and others gentle; ſome reſerv'd and others open, ſome lyars and others ſpeakers of truth; ſome traytors and others loyal; ſome turbulent and others calm; ſome crafty and others ſincere; ſome ſordid and others generous; ſome modeſt and others impudent; ſome incredulous and others credulous; in proof of which, he quotes many places out of *Hippocrates*, *Plato*, and *Ariſtotle*, aſſerting, that the diverſity of nations as to the frame of their bodies, and the turn of their ſouls, was owing to this difference of temperament. And 'tis found true by experience, how much the *Greeks* differ from the *Scythians*; the *French* from the *Spaniards*; the *Indians* from the *Germans*, and the *Ethiopians* from the *Engliſh*. Finally, altho' *Galen* did not arrive at the particular diſcuſſion of

the difference of wits amongst men, yet he knew full well it was necessary to make a repartition of the sciences among the youth, and to assign to each, that which was most suitable to his *genius*; when he said, *That well-order'd republicks should employ men of great wisdom and knowledge, who in their growing years should sound the wit and natural application of each, so to engage them to learn the art most agreeable to them, not leaving it to them to act at their own choice.*

CHAP. V.

What power the temperament has to make a man wise and good-natur'd.

HIPPOCRATES, in consideration of the good disposition of our rational souls, and how frail and changeable human bodies are wherein they reside, deliver'd a sentence worthy so great an author: *Our rational soul is always the same, throughout the whole course of our life, in youth and in age, when we are children, and grown men: The body, quite contrary, never continues in one state, nor is there any means to keep it so*; for childhood is, and will be, hot and moist; youth, temperate; manhood, hot and dry; middle-age, moderate in heat and cold, but inclining to driness; and old-age, cold and dry; therefore he said, *When the four elements, but more especially fire and water, enter the composition of man's body, in the same proportion and measure, the soul becomes very ingenious, and endued with an excellent memory; but if the water exceed the fire, it proves stupid and dull*, not so much through any defect of her own, as from the depravity of the instrument wherewith she acts. Which *Galen* weighing well, boldly concluded, that all the inclinations and dispositions of a rational soul,

follow'd

follow'd without doubt the conſtitution of the body with which ſhe was cloathed; and proceeding yet farther, he blames the moral philoſophers for not ſtudying phyſick, ſeeing tis certain, that not only prudence, which is the foundation of all the virtues, but alſo fortitude, juſtice, and temperance, with their oppoſite vices, depend in great meaſure on our conſtitutions; therefore he ſaid, *It was the employment of phyſick to expel vices from man, and to introduce their contrary virtues:* ſo that he has left us an art to extinguiſh luſt, and to promote chaſtity; to render the proud more pliant and tractable; the covetous, liberal; the coward, valiant; the ignorant, wiſe and knowing: and all the care he employs to obtain his end is, only to correct the ill conſtitution of the body, by the aſſiſtance of phyſick, and a regimen correſponding to each virtue, and contrary to each vice, without any regard in the leaſt of the ſoul; purſuant to the opinion of *Hippocrates*, who openly declar'd, the ſoul was not ſubject to any change, and ſtood in need of no power to acquit herſelf of thoſe ties ſhe was under, provided ſhe had good organs: whereupon he conceiv'd it was little leſs than an error, to ſeat the virtues in the ſoul, and not in the organs of the body, by which the ſoul acted, and without which he thought no virtue was to be acquired, except by introducing a new temperament.

But this opinion of his is erroneous, and contrary to that ordinarily received by the moral philoſophers, that the virtues are ſpiritual habits, having their ſeat in the rational ſoul; for ſuch as the ſubject is, ſuch muſt be the accident which is received: moreover, that the ſoul being the agent and mover, and the body the patient which is moved by it, it is much more to the purpoſe to place the virtues in the agent, rather than in the patient.

And were the virtues and vices ſuch habits as depended purely on the conſtitution, it might thence be concluded, that man acted only as a natural agent, and not as a free one; for ſo he would be inevitable ſway'd, in proportion to the good or bad diſpoſition attending his conſtitution, and by conſequence his beſt actions

would deserve no reward, nor his worst any punishment, according to the saying, *That as to things which are natural to us, we can neither merit nor demerit.* But on the contrary, we see a great many persons who fail not to be virtuous, in spite of a constitution that is vicious and deprav'd, and such as rather dispose them to evil than good, according to that saying, *That a wise man is superior to the ill influences of heaven:* and for what concerns wise and discreet actions, we see many indiscretions committed by very wise and well-temper'd men; as on the other side, not a few discreet actions performed by persons that are not so; and who are of no happy constitution. Whence we may collect, that prudence and wisdom, and other human virtues, are from the soul, and depend not at all upon the composition or frame of body, as *Hippocrates* and *Galen* have vainly imagin'd.

BUT as it may seem strange, that these two great physicians, and with them *Aristotle* and *Plato*, were of the same opinion, and all without truth; we are to take notice therefore, that the perfect virtues, such as the moral philosophers treat of, are spiritual habits, which have place in the rational soul, and whose being is altogether independent upon the body. From which it is evident, there is in man neither virtue nor vice, (I say nothing of supernatural virtues, as being not of this rank) that has its proper temperament of body, either to facilitate or retard him in his actions; this temperament then, the moralists improperly call virtue or vice, considering that men, ordinarily speaking, betray no other inclinations than those mark'd out by this temperament. I say, ordinarily speaking, because in effect many mens souls are fill'd with perfect virtue, although the organs of their body afford them no temperament subservient to accomplish the desires of the soul; and yet nevertheless, for all that, by virtue of their free-will, they fail not to act like good men, though not without some struggle and reluctance: according to which St. *Paul* has said, *I delight in the law of God after the inward man, but I see another law in my members warring against the law of my mind, and bringing me into captivity to the law of sin, which is in my members. O wretched!*

wretched man that I am! who ſhall deliver me from the body of this death? I thank God through Jeſus Chriſt our Lord. So then with the mind I my ſelf ſerve the law of God, but with the fleſh the law of ſin. In which words St. *Paul* gives us to underſtand, that he felt within himſelf two laws, wholly oppoſite; one in his ſoul, which made him to love God's law, the other in his members, which led him to ſin.

WITH ſuch like inclinations as theſe, virtuous perſons find it a hard task to live well, and not without reaſon was it ſaid, *That the road to virtue was cover'd over with thorns:* but if the ſame ſoul that is bent upon meditation, meets a brain hot and dry, which are the diſpoſitions peculiar to watching; and if, when it attempts to faſt, it finds a ſtomach hot and dry, of which conſtitution, according to *Galen*, the man is that loaths meats; and if when it aims to embrace chaſtity, it meets the parts cold and moiſt, without doubt it will accompliſh the ſeveral purpoſes without any ſtruggle or reluctance whatever, becauſe the law of the mind and the law of the members exact both the ſame thing, and ſuch a man, in ſuch a caſe, may act virtuouſly, without any violence to his nature.

ARISTOTLE knew well, that a good temperament made a man prudent, and of a good diſpoſition; which occaſion'd him to ſay, *That the good temperament did not only affect the body, but alſo the mind of man:* but he has not ſhewn what this good temperament was; on the contrary, he aſſerted, *That mens diſpoſitions were founded upon hot and cold:* but *Hippocrates* and *Galen* exclude thoſe two qualities as vicious, approving the equality of temperament, where the heat exceeds not cold; nor the moiſture, drineſs; which made *Hippocrates* ſay, *If the great moiſture of the water, and the exceſſive drineſs of the fire, are equally temper'd in the body, the man will be very wiſe.* Nevertheleſs, many phyſicians, becauſe of the great reputation of the author, upon enquiring into this temperament, have found that it does not anſwer what *Hippocrates* promiſed; but on the contrary, their opinion was, that thoſe who had it were weak men, and of little vigor, and did not expreſs

in their actions so much conduct as those of an ill constitution; altho' indeed they are of a very sweet and affable temper, and inoffensive to every man in word and deed, which makes them pass for very virtuous, and void of those passions which raise tempests in the soul.

THESE physicians disapprove the equal temperament, inasmuch as it disables and flats the force of the spirits, and is the cause they do not act freely as they ought; which appears evidently in two seasons of the year, the spring and autumn, when the air falls out to be temperate, for then usually happen diseases; insomuch that the body is observed to be much more healthful when it is either very hot or very cold, than during the mediocrity of the spring time.

FOR my own part, I believe cold is of the most importance to the rational soul, to preserve its virtues in due peace, and to prevent all undue ferments amongst the humours; for *Galen* says no less, there is no quality so much blunts the concupiscible and irascible faculty as cold, nor that so powerfully excites the rational faculty, as *Aristotle* assures us that does, especially if it be joined with dryness; for this is certain, as the inferior part is disabled or depressed, the faculties of the rational soul in the same proportion are exalted and inlarged.

WHEREUPON *Aristotle* proposed this question: *Why those who are in fear falter in their speech, tremble with their hands, and hang their lips? It is* (says he) *because this passion is a defect of heat, which commences from the parts above:* whence also comes the paleness of the face.

ABSTINENCE likewise is one of the things which chiefly mortifies the natural heat, leaving the man cold: for our nature is supported, says *Galen*, by eating and drinking, in the same manner, as the flame of the lamp is fed by the oil; and there is so much natural heat in the body that has digested flesh-meats, that they afford him nourishment in proportion to his heat, and if they should yield him less in quantity, his heat would insensibly diminish; and this made *Hippocrates* forbid the letting of children fast, because their natural heat evaporated and wasted for want of being fed.

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As for ſleep, *Galen* ſays, it's one of the things which moſt fortifies our heat, for by its means that inſinuates into the hidden receſſes of our bodies, and animates the natural virtues; and much after the ſame manner our food is aſſimilated and turned to our ſubſtance; whereas waking generates corruptions and crudities; and the reaſon is, becauſe ſleep warms the inward parts, and cools the outward; as on the contrary, waking cools the ſtomach, liver, and heart, which are the vitals, and inflames the external parts, the leſs noble, and leſs neceſſary: hence he that does not ſleep well, muſt needs be ſubject to many cold diſeaſes. *To lie hard, to eat but once a day, and to go naked, Hippocrates* ſaid was the utter ruin of the fleſh and blood, wherein the natural heat is plac'd. And *Galen* giving the reaſon why a hard bed weakens and waſtes the fleſh, ſaid, *That the body was in pain, and ſuffer'd deeply for want of ſleep, and that by the uneaſy changes of motion from ſide to ſide, it was haraſſed by reſtleſs nights.* And how the natural heat decays, and is diſſipated by bodily labour, the ſame *Hippocrates* declares, teaching how a man may become wiſe; *In order to be wiſe, a man muſt not be oppreſſed with too much fleſh, for that belongs to a hot temperament, which is the quality that deſtroys wiſdom.* Prayer and meditation, cauſe the heat to mount up to the brain, in the abſence of which, the other parts of the body remain cold, and if the intention of mind be great, they ſoon loſe the ſenſe of feeling, which *Ariſtotle* affirmed to be neceſſary to the being of animals, and that the other ſenſes, in compariſon of that, ſerved only for ornament and well-being. For, in effect, we might live without taſting, ſmelling, ſeeing, and hearing; but the mind being buſied in ſome high contemplation, fails to diſpatch the natural faculties to their poſts; without which, neither the ears can hear, nor the eyes ſee, nor the noſtrils breathe, nor the taſte reliſh, nor the touch feel; inſomuch as they who meditate are neither ſenſible of cold, heat, hunger, thirſt, nor any wearineſs whatever: and feeling being the centinel that diſcovers to a man the good or ill done him, he cannot be without it: ſo that being frozen with

cold, or burnt up with heat, or dying away with hunger or thirst, he is not sensible of any of these inconveniencies, because he has nothing to report them to him.

IN such a state, *Hippocrates* says, the soul neglects its charge, and whereas its duty is to animate the body, and to impart to it sense and motion, yet nevertheless it leaves it wholly destitute and unprovided of any succours. They who are hurt in any part of the body, and feel no pain, assuredly are distemper'd in mind.

BUT the worst disposition observed among men of learning, and those that are devoted to studies, is a weak stomach, because the natural heat required for digestion is wanting, that very heat being usually carried to the brain, which is the cause the stomach is filled with crudities and phlegm: for which reason *Celsus* recommends it to the physician's care to fortify that part in men of meditation more than any other, because prayer, meditation, and hard study, extreamly cool and dry the body, rendering it melancholy: for which reason, *Aristotle* demanded, Whence it is we see all that have excelled, whether it be in the study of philosophy, or government, or the poets, or in any other art whatsoever, have been melancholy.

BUT the quality observed to be best for the rational soul, is the cold constitution of body. This is easily prov'd, if we run through the several stages of man's life, infancy, youth, manhood, middle-age, and old-age; for we find, that because each age respectively has its particular temperament, accordingly at one time a man is vicious, at another virtuous; in one he is indiscreet or perverse, and in the other wise and better advis'd. Infancy is nothing else but a hot and moist temperament, in which *Plato* said, the rational soul was, as it were, plunged and stifled, not being able freely to employ the understanding, will, or affections, till in length of time it passes to another age, and has gain'd a new temperament. The virtues of infancy are very many, and the vices but very few; they are docile, tractable, gentle, and easy to receive the impression of all kinds of virtues; they are bashful, and full of fear, which,

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according to *Plato*, is the foundation of temperance; they are credulous and eaſy to be led; they are charitable, frank, chaſte, humble, innocent, and undeſigning; to which virtues Jeſus Chriſt had regard, when he ſaid to his diſciples, *Except ye become as little children, you ſhall not enter into the kingdom of heaven.* *Hippocrates* divided infancy into three or four ſtations, and becauſe children from the firſt to the fourteenth year always admit abundance of humours, and a variety of temperament; ſo likewiſe they are ſubject to divers diſeaſes, and their ſouls at the ſame time are not without a great many different virtues and vices: in conſideration of which, *Plato* began to inſtruct a child from the very firſt year, although he could not then ſpeak, directing his nurſe, how to diſtinguiſh by his laughing, his tears, and even his ſilence, his virtues and vices, and how ſhe ſhould correct them.

Youth, which is the ſecond age of man, is reckoned from the fourteenth to the five and twentieth year; this age, according to the opinions of phyſicians, is neither hot nor cold, nor moiſt nor dry, but temperate, and in a mediocrity of all the qualities; the parts of the body in this temperament are ſuch as the ſoul requires for all ſorts of virtues, and eſpecially for wiſdom. The virtues we have allotted to infancy, ſeem to be acts proceeding from meer inſtinct of nature, like thoſe of ants, ſerpents, and little bees, which act without reaſon; but thoſe of youth are perform'd with judgment and diſcretion; ſo that he who acts at that age, diſcerns what he does, and with what deſign, and knowing the end, he accordingly diſpoſes the means that lead to it. Where the holy ſcripture ſays, *That the heart of man was inclined to evil from his youth*; that is to be underſtood excluſively, that is to ſay, from the time he paſſes from infancy to youth, which are the moſt virtuous ages of man's life.

The third age is manhood, which is reckoned from twenty-five to thirty-five years; its temperament is hot and dry, of which *Hippocrates* ſaid, *When the fire exceeds the water, the mind becomes mad and furious*; and experience no leſs confirms it, for there is no ill

which a man is not acquainted with, and tempted to at that very time: passion, gluttony, letchery, pride, murders, adulteries, thefts, and rapines; rash designs, vanity, tricks, lyes, quarrels, revenge, hatred, indignities, and insolence, are the fairest inheritance of these; at which age *David* perceiving himself to be, cried out, *Lord, cut me not off in the midst of my days:* for manhood is the middlemost of the five ages of man's life, which are infancy, youth, manhood, middle-age, and old-age.

FROM all which it is no less evident, that the soul may in some sense deserve excuse, if she makes any false steps, because in manhood the body is more intemperate, which occasions the soul to incline with more difficulty to what is virtuous, and with more ease to what is vicious. 'Tis to the very letter what the wise man intimates; *I had for my lot a good soul, and from my infancy I appeared of great wit, and still growing wiser and wiser,* (which is to be understood of his youth) *I had nevertheless a filthy and intemperate body* (such an one is in manhood,) *and I found at the end of the account, that man could not be chaste or continent, were it not for the special grace of God.* Whereupon *David* remembring what had past in so dangerous an age, said, *Remember not the sins of my youth, nor my transgressions.*

AT the fourth age, which is the middle-age, man returns to be more temperate, because in proceeding from hot to cold, he must necessarily pass through the intermediate degrees by which, with that driness that manhood has left in the body, the soul is made wise. Whence it comes that men who have lived fast in their younger days, are subject to the great changes we see every day appear, when they recollect their ill-spent days, with endeavour to amend them. This age begins from thirty-five years, and reaches to forty-five, more or less, in proportion to the temperament and complexion of each respectively.

THE last age of man is old-age, in which the body is cold and dry, subject to a thousand ills and infirmities; all the faculties are besotted, and disabled in performing

forming their ordinary functions; but because the rational soul is still the same in infancy, youth, manhood, middle-age, and old-age, without receiving any change to diminish its powers, therefore when it reaches this last age, and to this cold and dry temperament; it is just, prudent, strong, and endued with temperance; and though we ought to attribute these virtues to the whole man, yet is the soul allow'd to be the first mover, according to this, *That the soul is the principle from which we understand.* So long as the body is vigorous and active in its vital, natural, and animal faculties, man is but very slenderly provided with moral virtues; but as that comes to lose its strength, the soul strait advances in virtues. St. *Paul* seem'd to insinuate no less in these words, *For when I am weak, then am I strong.* And assuredly this is very true, because the body in no age is weaker than in old-age, nor the soul more ready to perform such actions as are conformable to reason.

NOTWITHSTANDING all which, *Aristotle* always reckon'd six vices incident to old men, from the coldness of age: the first, that they are *cowards*, because courage and valour have great fire in them, and a large stock of blood, of which old men have but very little, and that little too congeal'd: the second, that they are *covetous*, and that they guard their treasure more carefully than they need; for though they find themselves arrived at the last stage of their lives, and that reason should teach them, where the journey is short, the charge of defraying it is small, their avarice nevertheless and their thrift fail not to haunt them, as if they were but yet in their infancy, and they were to run through no less than all the five stages of their lives, and that it is good to store, as if they were always to live. The third, that they are *suspicious*; but I cannot imagine why *Aristotle* calls this a vice, since it is certain, that it proceeds from the experience they have had of so many tricks in the world, and also from recollecting what part they themselves acted in their younger days, that they are ever upon their guard, as knowing full well how little trust is to be reposed

in men. The fourth, that they are *diffident*, and of ſmall hopes, never promiſing themſelves ſucceſs in their affairs, and of two or three deſigns they may have, they always fall upon the worſt, and upon that lay out all their application. The fifth, that they are *ſhameleſs*, becauſe, as *Ariſtotle* ſays, baſhfulneſs and bluſhing are full of blood, of which old men have ſo little, as by conſequence they are without ſhame. The ſixth, that they are very *incredulous*, thinking that the truth is never told them, becauſe their memories are ſo freſh of the juggling and deceits they have met with in the world, during the paſt courſe of their lives.

YOUNG children have, as *Ariſtotle* has noted, all the virtues quite contrary to theſe vices; they are fearleſs, frank, not diſtruſtful in the leaſt, always full of hopes, very baſhful, eaſily perſuaded and impoſed upon.

THE ſame things we have evidenc'd in the ſeveral ages of man's life, we might alſo ſhew in the difference of ſex, what virtues and vices man has, and what woman, as well by reaſon of humours, blood, choler, phlegm, and melancholy; as alſo from the diverſity of climates, and particular countries. In one province the men are valiant, in another cowards; in this deliberate, in that raſh; in one lovers of truth, in another lyars. And if we run through all the variety of meats and drinks, we ſhall find that ſome feed this virtue, and ſtarve that vice; and others, on the contrary, nouriſh ſuch a vice, and depreſs ſuch a virtue; but in ſuch a manner, as the man nevertheleſs ſtill remains free to chuſe as he pleaſes; according to that, *He hath ſet fire and water before thee, ſtretch out thy hand unto which thou wilt*; for there is no conſtitution can do more than incite the man, without forcing him, if he loſes not his reaſon; and it is to be obſerved, that in ſtudying, and contemplating things, man acquires another temperament beſides what belongs naturally to the conſtitution of his body; for, as we ſhall prove hereafter, of the three powers a man has, the memory, common ſenſe, and imagination, the imagination only, as *Ariſtotle* has noted, is free to frame what it pleaſes; and by the operations of this faculty, *Hippocrates* and *Galen* ſay,

ſay, the vital ſpirits, and the blood of the arteries are always ſet on work, and in motion; ſhe diſpatches them where it ſeems good to her, and the parts to which the natural heat flies, become thereby more effectual to perform their functions, and other parts weaker; for let any be put to the bluſh at an offence taken, the natural heat ſtrait mounts up, all the blood flying to the heart to fortify the iraſcible faculty, and to depreſs the rational. But if we proceed to conſider, that God enjoins us to forgive injuries, and do good to our enemies, and to reflect a while upon the recompence attending it, all the natural heat and blood ſtrait riſes up to the face, to ſtrengthen the rational, and debilitate the iraſcible faculty; and ſo it being at our choice, with the imagination to fortify what faculty we pleaſe, we are juſtly rewarded when we ſtrengthen the rational and diſable the iraſcible faculty; and as fairly puniſhed, when we raiſe the iraſcible, and depreſs the rational faculty. From which we may judge, with how good reaſon the moral philoſophers recommend to us the ſtudy and conſideration of divine matters, ſince by theſe means alone we might acquire the temperament and ſtrength which the rational ſoul has uſe of, as well as ſuppreſs the inferior part. But I cannot forbear adding one thing before I end this chapter, which is, that a man may exerciſe all the acts of virtue, without having that advantageous conſtitution of body required, although not without great pain and difficulty, acts of prudence excepted; for if the man be by nature imprudent, nothing but God can cure it with a remedy; the ſame is to be underſtood of diſtributive juſtice, and of all the acquir'd arts and ſciences.

CHAP.

CHAP. VI.

What part of the body ought to be well tempered, that the child may be witty.

THE body of man having ſo great a difference of parts and powers (each deſtin'd to its end) it will be highly neceſſary, above all things, to know what part nature has contriv'd as the principal inſtrument to diſpoſe a man to be wiſe and prudent: for it is certain, that each part has its proper uſe, and a particular compoſition for the office it is to diſcharge.

THAT the heart is the chief ſeat where reaſon reſides, and the inſtrument by which our ſouls perform the actions of prudence, memory, and underſtanding, was a received opinion amongſt the natural philoſophers before *Hippocrates* and *Plato* were born. The heart is therefore ſtiled the ſuperior part of man in many places of ſacred writ, which accommodates itſelf to the way of ſpeaking in uſe at that time. But thoſe two great philoſophers have given us to underſtand, that this opinion is falſe, and with great reaſon and experience have proved the brain to be the chief ſeat of the rational ſoul; and thus it was generally receiv'd, *Ariſtotle* only diſſenting, who revived that old opinion, endeavouring, by topical arguments, and ſeveral conjectures, to make it probable, for the ſake of contradicting *Plato* in every thing. Not to diſpute which is the trueſt opinion (for in our days there is not a philoſopher but allows the brain to be the inſtrument by nature deſign'd to make a man wiſe and prudent) it will only be requiſite to lay down the conditions whereby that part is beſt organiz'd, that the youth may thereby become towardly and witty.

THAT

THAT the rational ſoul may conveniently perform the actions of underſtanding and prudence, there are required four qualifications of the brain: I. Good configuration. II. Unity of parts. III. That the heat exceed not the cold, nor the moiſture ſurpaſs the drineſs. IV. That the ſubſtance of the brain be compoſed of very fine and delicate parts.

FOUR other things are compriz'd under the good configuration. 1. A good figure. 2. Sufficient quantity. 3. That there be four ſeparate and diſtinct ventricles in the brain, each diſpoſed in its proper place. 4. That its capacity ſhould not be greater nor leſs than is convenient for its functions.

WE are taught by *Galen* to know when the figure of the brain is good, for in reflecting on the outward form and figure of the head, he declares, it is as it ought to be, if it reſembles a ball of wax made exactly round, and compreſs'd gently on each ſide; the turn of the forehead, and the hind-part of the head a little jetting out; whence it follows, that the forehead and hind-part of the head very flat, are a ſign the brain has not the figure approved for a ſharp wit and ability.

WHAT is moſt to be admired is the quantity of brains the ſoul has occaſion to make uſe of for reaſon and diſcourſe; becauſe not one amongſt all the brute-animals has ſo much as man: inſomuch, that if the brains of two very large oxen were joined, they would not ſo much as equal the brains of one man; and what is yet more obſervable, is, that amongſt brute beaſts, thoſe who approach neareſt to man in wit and cunning (as the monkey, the fox, and the dog) have ſtill a greater quantity of brains than other animals, although of much greater bulk; which made *Galen* ſay, that a little head in man was always defective, becauſe it wanted brains; as he alſo affirm'd, it was no leſs an ill indication, to be born with a great jolt head, becauſe it was all fleſh and bones, with very little brains; as it often fares with very large oranges, which when they come to be opened, have little juice and pulp, but a very thick rind. Nor is any thing more grievous

to

the rational ſoul, than to be plung'd in a body over-ſtock'd with bones, with fat, and with fleſh. *It is abſolutely neceſſary*, ſays *Hippocrates*, *for a man that would be very wiſe, not to be oppreſſed with much fleſh, nor fat, but rather to be lean and ſlender: for the fleſhy temperament is hot and moiſt, with which 'tis impoſſible, or at leaſt very improbable, but the ſoul ſhould become blockiſh and ſtupid.* *Chryſippus* declares, that the ſoul of a very fat man, can be of no other uſe to him than ſalt to preſerve his body from ſtinking. *Ariſtotle* confirms this opinion, affirming, that man to be a ſot that had an over-great head and fleſhy, comparing him to an aſs, becauſe, in proportion to the other parts of his body, there is no beaſt's head ſo very fleſhy as that of an aſs.

BUT as to corpulence, it ought to be obſerv'd, groſs men are of two ſorts, ſome abounding with fleſh and blood, whoſe temperament is hot and moiſt, as others again, who have not ſo much fleſh and blood as they are crammed with fat, are of a cold and dry conſtitution. *Hippocrates*'s opinion is to be underſtood of the firſt, becauſe of the great heat and humidity, and the abundance of fumes and vapours ariſing without intermiſſion in thoſe bodies, which cloud and overthrow their reaſon; which is not the caſe of the other, that are only plump and fat, whom the phyſicians dare not bleed, becauſe they have too little blood; and there is ordinarily abundance of wit to be found, where there is not ſo much fleſh and blood. That we may thoroughly underſtand the great agreement and correſpondence between the ſtomach and the brains, eſpecially in what relates to wit and cunning, *Galen* has declared, *A groſs paunch makes a groſs underſtanding*: but if he means this of thoſe that are fat, he has leſs reaſon, for they have a very wateriſh wit. *Perſius* proceeded upon this reaſon, when he ſaid, *That the belly gave wit.*

PLATO affirmed, there is nothing darkens the ſoul ſo much, nor more over-caſts the brain, than the black fumes and vapours ariſing from the ſtomach and the liver at the time of digeſtion; nor is there on the other hand, any thing that elevates it to ſuch high

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meditations as faſting and a ſpare body, not overcharg'd with blood. Moreover, *Plato* affirms, that the heads of wiſe men are ordinarily tender, and apt to be annoy'd upon the leaſt occaſion; and the reaſon why nature has made them of ſo delicate a head, ſeems to be for fear of loading them with too much brains to the diminiſhing of their wit. So true is this doctrine of *Plato*, that tho' the ſtomach be far from the brain, nevertheleſs it annoys it, if it be overcharg'd with fat and fleſh: nor is there any myſtery in this, becauſe the brain and the ſtomach are knit and tied together by means of certain nerves, which communicate their diſaffections to each other; and, on the contrary, if the ſtomach be dry and empty, it much ſharpens the wit, as we may ſee in thoſe who are pinch'd with hunger and want.

BESIDES all this, it is requiſite that there be four ventricles in the brain, to enable the rational ſoul to reaſon and diſcourſe; one diſpoſed on the right, the other on the left ſide, the third in the middle, and the fourth in the hinder part of the brains, as appears from anatomy. Hereafter, when we ſhall treat of the difference of wits, we ſhall ſhew what uſe the rational faculty makes of theſe ventricles, be they greater or leſs.

THAT the brain be well-figur'd, of ſufficient quantity, and the number of ventricles ſo many, little or great, as we have ſhewn, is not yet enough. Its parts muſt alſo obſerve a kind of continuity, without being disjoyn'd; for which cauſe we have obſerved ſome men wounded in the head have loſt their memory, others their common ſenſe, and others their imagination; nay, even though the brain after cure has been rejoyn'd by art, becauſe there was not the ſame natural union as before.

THE third of the four principal qualifications, is, that the brain ſhould be temperate, of a moderate heat, and without exceſs of the other qualities; which diſpoſition of the brain we have already affirm'd to be that, call'd true temper, for 'tis that which makes a man capable, and the contrary otherwiſe.

THE fourth, that the brain ſhould be compoſed of very fine and delicate parts, and is what *Galen* thought

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the moſt important qualification of all the reſt. For giving an indication of the good compoſition of the brain, he ſays, that the ſharp wit ſhews the brain to be formed of very ſubtle and delicate parts; but if the underſtanding be dull, it denotes the brain to be compoſed of a groſs ſubſtance; where he takes no notice of the temperament.

To the end the rational ſoul might by this means reaſon well, the brain ought to have theſe qualities. But here ariſes a great difficulty, which is, in the opening the head of any beaſt whatever, we ſhall find his brains compoſed after the very ſame manner as man's, without being wanting in any of the conditions mention'd. To which it is anſwered, That in this, man and brute beaſts agree, in having a temperament of the four firſt qualities, without which 'twould be impoſſible for them to ſubſiſt; ſo they are compoſed of the four elements, fire, air, water, and earth, whence ſpring and proceed heat, cold, moiſture, and drineſs. In the actions of the vegetative ſoul they alſo agree; accordingly nature has given to both alike organs and inſtruments neceſſary for nouriſhment; ſuch are the right fibres, traverſe and oblique, ſubſervient to the four natural faculties. They alſo conſpire in the ſenſitive ſoul, for ſo they have nerves and ſinews alike for the inſtruments of ſenſe. In local motion they alſo agree no leſs; thus have they both muſcles, as fit inſtruments directed by nature to move from place to place. They alſo accord in memory and fancy, for ſo have they both brains, as an inſtrument ſubſervient to thoſe two faculties, that are alike compoſed in both. The underſtanding is the ſole faculty that diſtinguiſhes man from beaſt, and becauſe the underſtanding acts without any corporeal organ, or depends not on the ſame for its being or preſervation, therefore nature had no need of a new turn in the compoſition of man's brain: however, the underſtanding hath occaſion for other faculties to operate, which faculties likewiſe have the brain for the inſtrument of their operations. We add farther, that the brain of man requires the conditions we have laid down, to the end the rational faculty may by means thereof perform

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operations every way agreeable and conformable to its ſpecies. As to brute-beaſts, it is certain, they have memory and fancy, and ſome other power that apes the underſtanding, even as a monkey apes a man.

CHAP. VII.

That the vegetative, ſenſitive, and rational ſouls are knowing, without being directed by teachers, when they meet with a temperament agreeable to their operations.

THE temperament of the four firſt qualities, which we have already call'd nature, hath force ſufficient of it ſelf, to leave the plants, the brutes, and man unprovided of nothing wherewith to act well, each according to his ſpecies, and to arrive at the higheſt perfection each is capable of; for without any teacher, the plants know how to ſpread and take root in the earth, to draw nouriſhment, to keep it, to digeſt it, and throw off the excrementitious parts; and brute beaſts know, as ſoon as ever they are brought into the world, what is agreeable to their nature, as well as to avoid what is evil and noxious. And what moſt aſtoniſhes thoſe that do not underſtand natural philoſophy, is, that man having a well-tempered and diſpoſed brain, ſuitable to each ſcience, immediately, and without being directed by any teachers, ſpeaks concerning that ſcience of his own accord ſuch elevated and ſubtle things, as are almoſt incredible. Vulgar philoſophers ſeeing the admirable actions performed by brute-beaſts, ſay, that there is nothing in them to ſurprize us, becauſe they act thoſe things by inſtinct of nature, which directs each ſpecies what it ought to do. They ſay well, in one ſenſe, for

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as we have proved already, nature is nothing else but the temperament of the four first qualities, and that the same is the master, instructing our souls how to perform their offices. But these philosophers call *instinct of nature* a certain heap of things they know not what, which they have never been able in the least to explain, or make intelligible. Those excellent philosophers, *Hippocrates*, *Plato*, and *Aristotle*, have referred all these admirable operations to heat, cold, moisture, and driness, which they take for the first principles without going farther. And being asked, who has taught the brute beasts to perform such surprizing actions, and men to reason? *Hippocrates* replied, *Nature, without any other teacher or master*; as if he would have said, the faculties, or the temperament of which these faculties consist, are all-knowing of themselves, without the direction of any master. This we shall easily apprehend, if we reflect on the operations of the vegetative soul, and of all the others which govern man; for from a drop of human seed, well-tempered, well-digested, and well-proportioned, is framed a body so regularly composed, so exact, and so beautiful, as the best sculptors in the world can but imitate at a distance. *Galen* amaz'd at the sight of so admirable a structure, the number of its parts, the situation, the figure, and use of each part, cried out, It was impossible for a vegetative soul and temperament to know how to make so admirable a work: and that God alone was the author of it, or, at least, some other very wise intelligence. But we have already utterly disallowed this way of talking, for it is unbecoming natural philosophers to impute the effects immediately to God, and overlook second causes; more especially in this case, where we see by experience, that if the seed of man be of an incongruous substance, not having the proper temperament, the vegetative soul produces a thousand extravagances: for if it be colder and moister than it ought, *Hippocrates* has told us, men would become eunuchs or hermaphrodites into the world; and if it were too hot and dry, *Aristotle* has noted, they would prove hare-lip'd, splay-footed, and flat-nosed, as the *Ethiopians* generally are, and would dwindle

dwindle to a dwarfish stature; and if too moist, says *Galen*, they are like to prove unlick'd and unshapen lubbers: all which enormous defects, are great deformities in mankind, for which there is little reason to magnify nature, or to esteem her wise; but had God been the author of these works, each of these fore-mentioned qualities could not have failed of perfection. *Plato* says, only the first men were made by God's own hand; and all the rest since have been born by the ordinary course of second causes, which, if they are found in order, the vegetative soul performs her part very well; but if she concurs not as she ought, a thousand absurdities are produced. The good order for this effect is, that the vegetative soul have a right temperament: otherwise let *Galen* and all the philosophers in the world give a reason, why the vegetative soul should have more skill and ability in the first age of man's life, to shape the body, to nourish and make it thrive; than when old age approaches, when she is disabled? For instance, if an old man have a tooth drop out, there is no means or expedient to get another to grow in the same place; whereas, if a child lose all his, we see nature repairs the loss, by helping him to new ones. How then is it possible, that a soul that has no other business throughout the whole course of life, but to attract aliments, to retain and digest them, and expel the excrements, and duly repair the lost parts, at the end of our life should either forget or not be able to do the same? Certainly *Galen* would reply, that the vegetative soul is skilful and able in infancy, because of the great degrees of natural heat and moisture; and that in old age, she wants either ability or skill to do the like, because of the extream cold and driness of the body incident to age.

In like manner, the skill of the sensitive soul depends much on the temperament of the brain, for if it be such as its operations require, it fails not to perform them aright; otherwise, she commits a thousand errors, as well as the vegetative soul. *Galen*'s test to discover in one view the skill and efforts of the sensitive soul, was this, he took a kid newly kidded, which being on his legs began to go, as if he had been informed and taught that

that his feet were given for that very end; and after a little ſpace, finding before him ſeveral platters full of wine, water, vinegar, oil, and milk, upon ſmelling to each of them, he lapped only the milk; which being obſerved by many philoſophers preſent, they began to cry out, that *Hippocrates* had with good reaſon ſaid, *That ſouls were directed what to do without the teaching of any maſter.* Which is the ſame with the wiſe man's ſaying, *Go to the ant, thou ſluggard, conſider her ways, and be wiſe, which having no guide, overſeer, or ruler, provideth her meat in the ſummer, and gathereth her food in the harveſt.*

GALEN, not contented with this ſingle experiment, two months after brought the kid into the fields, almoſt ſtarved to death, and ſmelling on ſeveral ſorts of herbs, he fed only on that which was goats-meat. But if *Galen*, who ruminated on the efforts of this kid, had ſeen three or four of them together, he would have obſerved ſome run better than their fellows, ſhift better, and acquit themſelves better in each point we have mentioned; and had he brought up two colts of the ſame mare, he might have obſerved the one to be more graceful in going, to have better heels, to be more manageable, and ſtop better than the other; and had he taken an airy of hawks to train, he might have diſcovered, that one would have delighted much in ſeizing his game, another to be rank-winged, and the third a haggard, and ill-mann'd. He would have found the ſame difference in ſetting-dogs, or harriers, tho' each were littered from the ſame ſire or dam, the one needs only the noiſe of the chace, and rouſe the other never ſo loudly, it would affect him no more than a ſhepherd's dog. All which can never be aſcribed to the vain inſtincts of nature, dream'd of by ſome philoſophers; for if they were asked, why one dog has a better inſtinct than another, both being of the ſame kind and breed? I know not what they could anſwer, without having recourſe to their common ſhift, namely, that God had given one a better natural inſtinct than another. And if they were further ask'd, why this hopeful hound, when young, hunted well, but become old, was not ſo good for the ſport?

ſport? and on the other hand, why the other, when young, could not hunt, but being old, was expert and fit to fly at all game? I know not what they could ſay. For my particular, I ſhould ſay, that the dog that hunted better than the other, had more ſagacity; and as for him that hunted well when young, and turned cur when old, that ſo it fared, becauſe ſometimes he had the qualities fit for the chace, which at other times he wanted. Whence we may collect, that ſince the temperament of the four firſt qualities is the reaſon why one brute beaſt acquits himſelf better than another of the ſame kind, the temperament is no leſs the maſter which directs the ſenſitive ſoul what it ought to do.

Had *Galen* but reflected on the ſteps and motions of the ant, and obſerved her providence, her mercy, juſtice, and good government, he would have been at a loſs, as we are, to ſee ſo ſmall an animal endued with ſo great ſenſe, without the teaching of any maſter whatſoever. But when we come to conſider more cloſely the temperament of the ant's brain, and obſerve how proper it is for prudence, as we ſhall hereafter make appear, then will all our admiration ceaſe, and we ſhall underſtand, that brute beaſts arrive at the ability we diſcover in them from the temperament of their brain, and the images that enter there, thro' the ſenſes. And whereas it is owing to this good temperament of the brain, that amongſt animals of the ſame kind, one is more docile and ingenious than another; ſo if by any accident or diſtemper that ſhould chance to be alter'd and impair'd, he would forthwith loſe his ability, as man does under the like circumſtances. A falconer affirmed to me upon oath, that he had an excellent hawk for ſport, which became good for nothing, yet by applying a cautery he recovered him.

But here ariſes a difficulty, how the rational ſoul comes to be endued with this natural inſtinct, whereby ſhe performs the acts proper to her ſpecies, of wiſdom and prudence. It has been a controverted point betwixt *Plato* and *Ariſtotle*, which way man comes by knowledge: *Plato* ſays, That the rational ſoul is much older than the body, and enjoy'd in heaven before its union with

with the body, the company of God, from whom she descended, filled with wisdom and knowledge; but after her union, she lost this wisdom and knowledge, because of the ill temperament she met with; till in process of time this ill temperament was corrected, and in its place a better succeeded, by means of which, as being more fit for the sciences she had lost, she came by little and little to recollect what she had once forgot.

THIS opinion is false, and I admire so great a philosopher as *Plato* should be at a loss to give a reason for man's knowledge, seeing that brute beasts are endued with great sagacity, without deriving their souls from heaven; he is therefore without all excuse, especially considering he might have read in the book of *Genesis*, (which he had in such esteem) that God made *Adam*'s body before he formed his soul. It is much the same thing at this present, only with this difference, that nature now frames the body, and when that is once done, God infuses the soul into it, from which it never departs, no, not the space of a single moment.

Plato, *taking from holy Writ, the best Sentences in his Works, thence got the Name of* Divine.

ARISTOTLE took another course, affirming, *That all kind of doctrine and discipline was from knowledge antecedent to them*, as if he had said, all that men know, and all that they learn, comes from what they hear, or see, or smell, or taste, or touch; for the understanding can receive no notices, but what must pass thro' some one of the five senses. For which reason he said, *That the natural powers were in the nature of a blank paper*; which opinion is no less false than *Plato*'s. To prove and illustrate which I must first agree with the philosophers, that there is but one soul in a human body, which is the rational, that is the principle of whatever we do or accomplish; (altho' there want not contrary opinions, asserting no less than two or three distinct souls besides the rational): this being so, as to the acts performed by the rational soul, so far as it is vegetative, we have already proved that it knows how to form a man, and to figure him as he ought to be; that we know how to draw nourishment,

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to retain and digeſt the ſame, *&c.* and if there be defects in any parts of the body, it knows how to repair them anew, and to give them that ſtructure which their uſe requires. And as to the acts of the ſenſitive and motive faculties, a new-born babe can apply and lay its lips cloſe to preſs the milk, and this with ſo much art and addreſs, as the wiſeſt man in the world knows not how to do it ſo well. Beſides, it purſues what tends moſt to the preſervation of its nature, and flies what is noxious and offenſive; he knows how to laugh and to cry, without ſtaying to be taught by any. And if this be not ſo, who can the vulgar philoſopher pretend has taught children to perform theſe actions, or through which of their ſenſes have any notices arriv'd, that made them do it? I know well they may reply, that God has given them the ſame natural inſtinct as to brute beaſts; in which they ſay not ill, if by natural inſtinct they mean no other thing than the temperament.

MAN as ſoon as he is born cannot exert acts proper to the rational ſoul; ſuch as are to underſtand, imagine, and remember; becauſe the temperaments of children are not well adapted to ſuch acts, but rather appropriate to the vegetative and ſenſitive, as the temperament in old age is more proper for the rational ſoul, and leſs for the vegetative and ſenſitive ſoul; and if the brain, which by little and little acquires the temper that wiſdom requires, might obtain it at once, man at the ſame inſtant would be able to reaſon and diſcourſe better than if he had learnt the ſame at any time in the ſchools; but as nature cannot beſtow it but ſucceſſively and in time, ſo man by degrees gains knowlege. This is the main reaſon, as will appear clearly on conſideration, that from the time a man arrives at the higheſt pitch of wiſdom, by little and little he declines to ignorance, becauſe as he approaches nearer to the laſt and decrepit age, he daily advances towards another temperament which is wholly different from the former. But to the end, we may by experience know, if the brain be temperate, ſo far as the natural ſciences require, we need only attend to a thing, which happens every day; that if a man falls ſick of any diſtemper that changes the

temperament of his brain (as in melancholy and frenzy) he loses in a moment whatever wisdom, understanding, and knowledge he had, and utters a thousand extravagances; and on the contrary, I have frequently known very ignorant persons by this change of temperament, in the same distempers, inspired with more wit and ability than ever they had before.

To prove which, I cannot forbear telling you what happened to a courtesan in her sickness, who had during her health utterly lost her understanding, but as for her imagination, she conversed pleasantly, and made her compliments with a good grace; a certain contagious disease then rife, threw her into a malignant fever, in the midst of which, she shewed so much wit and judgment, as surpriz'd every one, and made her last will, the discreetest in the world, and died begging the mercy of God, and pardon for her sins. But what raised the greatest admiration was, that the same distemper seized on a very sensible and sober man, who had the cure of this sick person in charge, who died bereft both of wit and judgment, and neither did nor spoke the least sensible thing: and the reason of this was, that the temperament of the last, to which he owed his wit when he was well, was the self-same that the other took possession of by her distemper, instead of that she had in her health. Another instance of this, was a certain labourer, who being frantic, made a speech in my hearing, wherein he recommended his welfare to those about him, desiring them to take care of his wife and children, if it should please God to call him out of this world, with so many strains of rhetoric, and so great elegance, and purity of speech, that *Cicero* himself could scarce have made a better harangue in the open senate: at which, the standers-by, not a little surprized, asked me, whence appeared so great wit and eloquence in a man, who in his health could say never a wise word: I remember I answer'd, *That the fluent faculty of haranguing proceeded from a certain point or degree of heat of which this labourer was possessed, by means of his distemper*; for when the brain becomes hot in the first degree, it makes the man fluent, suggesting to his wit many

many things to ſay; but the reſerv'd have all a cold brain, as the great talkers a hot one. This man's frenzy was cauſed by abundance of choler imbib'd in the ſubſtance of the brain, for that is the proper humour for poetry, which occaſion'd *Horace* in his art of poetry to ſay, *That if the choler were not purged away in the ſpring, there would hardly ever be a better poet than himſelf.*

I CAN confirm the truth of this, from another lunatic, who for more than eight days, ſpoke never a word, and then immediately fell into a fit of rhiming, very often making no leſs than a good entire ſtanza; the by-ſtanders being ſurprized to hear a man diſcourſe all in verſe, who in his health never knew how to make one. To all which we may add, That the famous *Engliſh* dramatic writer, *Nat. Lee*, ſo noted for his poetical enthuſiaſm, had his imagination heated by his frenzy in ſo great a degree, that ſome of the loftieſt and ſublimeſt flights that ever were conceived by man, were pronounc'd by him *extemporare*, in the mad-houſe where he was confin'd; many of which, from time to time, were taken down by ſeveral friends, who uſed to go for that purpoſe to ſee him. But this being an inſtance of a native genius, improv'd and heighten'd into a ſtronger enthuſiaſm by the force of his diſtemper, is not to be mentioned, if compar'd with thoſe inſtances where the frenzy has ſo entirely alter'd the faculties of the mind, that it has inſpir'd a ſoul with abilities that it never had before, as in the preceding inſtances; and what may be farther illuſtrated, in the page of a certain nobleman, who in health was reckon'd a youth of very indifferent genius, yet when, by the ſeverity of a fit of ſickneſs, he grew delirious, he made ſuch agreeable diſcourſes, and gave ſuch pertinent anſwers to what was asked him, forming withal ſo fair an idea of the government of a kingdom (of which he conceited himſelf king) that all who came to ſee and hear him, were ſurpriz'd; nay, his lord, who for the novelty of the thing never ſtirred from his bed-ſide, wiſh'd he might never be cur'd. And when the page was recover'd, and the phyſician took leave of his lord, not without hopes of receiving a handſome gratuity, he met with this return;

I assure you, doctor, I never was so vex'd at any accident that befel me, as I am now, to see my page cured; because it seems unreasonable to me, to change so wise *a* folly *into such a* stupid understanding *as his is when he is well.* Nor did he meet with more gratitude from his patient, who told him, 'Twas with regret that he found himself cur'd, because, while he was frantic, he had the pleasantest enjoyments in the world, conceiting himself a kind of grand signior, and that there was no king on earth but was his vassal: adding, that tho' it were imaginary, he took as much pleasure in it as if it had been really true; so that according to him, his condition was chang'd for the worse, he finding himself but a poor page, that must begin to serve him, whom, in his sickness, perhaps, he would hardly have deign'd to make his page.

'TIS of no great importance what the philosophers think of this, and by what means it is brought to pass; for I am able to assure them from very credible histories, that some ignorant fellows that were sick of the same disease, have talk'd *Latin*, without ever so much as knowing what they said, when they came to themselves. I could tell of a she-lunatic, who told all that came to see her, their virtues and vices; so that no body durst go near her, for fear of the truths she reveal'd. Methinks I already hear from those that slight natural philosophy, that it is a meer mockery, and a fable; or if it be true, that the devil, as he is subtle and cunning, enter'd, by God's permission, into the body of this woman, and the other lunatics, we have already spoke of, making them utter those surprizing things. Yet ought they to be tender in saying thus, because the devil, not having the spirit of prophecy, cannot know future things. They hold it for a strong argument, to prove it false, that they do not understand how it can be done; as if difficult and sublime things were to be understood by every capacity. I shall not go about to convince those by reason, that have not any themselves, because it would prove labour in vain: but I shall chuse to speak to them from *Aristotle*, that the men who have such a proper disposition as their actions require, may know many

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things without having them tranſmitted by any particular ſenſe, or having learn'd them from any teacher: *Many alſo*, ſays he, *becauſe this heat is near the ſeat of wit, are inflamed or ſtruck with the diſeaſe of lunacy, or fir'd with a furious impulſe; whence came the ſybils, and the mænades, and ſuch as were ſuppos'd to be inſpired by a divine ſpirit; this happening not ſo much by ſickneſs, as by a natural exceſs.* Marcus, *a citizen of* Syracuſe, *was a good poet for it, when he was out of his wits; and thoſe in whom this exceſſive heat is more remiſs and moderate, are compleatly melancholic, but much wiſer.* By theſe words *Ariſtotle* owns, that many men, by reaſon of the extream heat of their brain, know things to come, even as the ſybils did; which proceeds not, as he ſays, ſo much from ſickneſs, as from the inequality of natural heat. And for this very reaſon he proved it clearly in the inſtance of *Marcus* the *Syracuſian*, who was a very excellent poet all the time he was beſide himſelf, from an over-heated brain; but as this great heat came to be moderated, he loſt the art of making verſes, tho' he remain'd more prudent and wiſe. So that *Ariſtotle* not only allows the temperament of the brain for the principal cauſe of theſe ſtrange effects, but alſo reproves them that affirm it to be by divine revelation, and not a natural thing.

HIPPOCRATES was the firſt that gave the name of divine to theſe wonderful effects. *If there be any thing divine*, ſays he, *in diſtempers, the prognoſtic of it muſt alſo be learn'd.* By which he adviſes the phyſicians, when they gueſs at diſeaſes, they ſhould thence frame a judgment in what ſtate they are, and from that, predict the criſis of their diſtemper. But what ſurprizes me moſt in this caſe, is, that if I ſhould ask *Plato*, how it comes, that of two children of the ſame father, one ſhould know how to make verſes without any maſter's teaching, and the other, after all his labours in the art of poetry, ſhould not know how to compoſe any? he might anſwer perhaps, That he who is born a poet, is poſſeſs'd with a divinity that inſpires him, and the other, not. It was therefore with reaſon *Ariſtotle* reprehended

him, seeing he might have fairly imputed it to the temperament, as he did in another place.

ARISTOTLE affirming, that there have been children, who at their birth pronounc'd distinctly some words, and afterwards became mute, reproves the vulgar philosophers of his time, who being ignorant of the natural cause of that effect, attributed it to divinities. Tho' he could never discover the reason and cause of childrens speaking at their birth, and being afterwards mute; yet, notwithstanding, it never once enter'd into his thoughts that it was owing to any supernatural effect, as the vulgar philosophers vainly imagine, who finding themselves entangled with the sublime and subtile things of natural philosophy, possess them that know nothing, that God, or the devil, are the authors of such prodigious effects, as proceed only from natural causes. Children that are begot in old age, may begin to reason and discourse a few days and months after they are born, because the cold and dry temperament, as we shall prove hereafter, is more appropriate to the operations of the rational soul, and what time, and the long succession of days and months might effect, is supplied by the sudden temperament of the brain, that after this manner is push'd forward by many causes leading to that end. *Aristotle* tells us of other children, who began to speak as soon as they were born, and afterwards were mute, till they arriv'd at the age allotted for speaking; so that this effect was occasion'd by the same causes as affected the page we have mentioned.

As for the she-lunatic who divined, how that might be, I will make more intelligible from *Cicero*, than from the natural philosophers, who describing the nature of man, speaks after this manner: *That creature of foresight, sagacious, sharp-witted, capable of all things, of good memory, endued with reason and council, which we call man:* and more particularly he affirm'd, that some men, by nature, surpass others in the knowlege of futurities: *for there is a power and kind of nature,* says he, *which penetrates into and predicts things to come, the force and nature of which, has never been yet explained by reason.* What led the natural philosophers into an

error

error, was their not considering, (as *Plato* did) that man was made after the likeness of God, and that he participates of the divine providence, being qualified to distinguish all the three differences of times, with memory for the past, sense for the present, imagination and understanding for the future. And as there are observed some men surpassing others in the remembrance of what is past, and some excelling others in the knowledge of the present, so are there some who are naturally more capable than others in guessing what is to come. One of the strongest arguments that enforc'd *Tully* to believe the rational soul incorruptible, was the observing with what certainty some sick people predicted futurities, especially when they were nearest death; from whence, he says, *That the melancholic falling sick, are endued with a kind of divination.* And *Hippocrates* observing this wonderful faculty of prediction in such persons, declares, *That when the distemper'd utter such divine things, 'tis a sign the rational soul is disengag'd from the body*, and therefore asserts, *that such never recover*; which, however, is, in some instances, contrary to experience.

And I myself hold, that there are some indications subservient to us in the knowlege of the past, and of the present, and that help us to conjecture at the future; nay, and to guess at certain secrets of heaven. *For the things of God from the creation of the world are clearly seen, being understood by the things that are made, Rom.* i. He that shall have the requisite faculty may attain it; and the other shall be such a one as *Homer* speaks of; the ignorant understand the past, but not the future; but the prudent and discreet is the ape of God, imitating him in many things; and tho' he cannot do it to so great a perfection, yet nevertheless he can counterfeit it in some measure. However, 'tis to be observ'd, that, at the best, this spirit of prognostication is by no means attended with the same infallible certainty as the predictions of the prophets of old, who were immediately inspired by the Holy Ghost.

CHAP. VIII.

From these three qualities alone, HEAT, MOISTURE, *and* DRINESS, *proceed all the differences of* wit *observ'd among men.*

AS long as the rational soul is in the body, it is impossible it should perform different and contrary actions, if to each it have its proper and peculiar instruments. This is clearly seen in the animal faculty, which exercises divers actions in the exterior senses, each having its particular and proper organ; the sight has it after one manner, the hearing after another; the taste, the smell, and the touch each after another: and if this were not so, there would be but one sort of actions, all would consist either in the sight, in the hearing, in the taste, in the smell, or in the touch; because the organ determines the power to one action only. From what passes plainly through the exterior senses, we may collect what is acted in the interior. We understand, we imagine, and remember by the same animal virtue. But if it be true, that each action requires its particular instrument, there must necessarily be one organ in the brain to understand, another to imagine, and a third to remember; for if the whole brain were organiz'd after one and the same manner, all would be either memory, or understanding, or imagination; but when we see such different actions, of necessity there must also be divers instruments. And yet if one should dissect a head to anatomize the brain, all would seem composed after the same manner, of the like substance, without difference of parts or diversity of kinds. I say, that it seems so,

ſo, becauſe, as *Galen* has obſerv'd, nature has placed abundance of things in man's body, that are compound, which the ſenſes nevertheleſs judge to be ſimple, becauſe of the ſubtlety of the mixture: which may alſo happen in the brain of a man, tho' to ſight it ſeems no ſuch thing. Beſides this, there are four ſmall ventricles in the cavity of the brain, of which *Galen* taught the uſe: but, for my part, I hold, that the fourth ventricle, which is behind the head, has no other function than to digeſt and refine the vital ſpirits, and turn them into animal, enabling them to give ſenſe and motion to all parts of the body, becauſe we cannot find in human bodies two ſuch contrary operations, that interfere with each other, ſo much as reaſoning and the digeſtive faculty. The reaſon is, that ſpeculation requires the repoſe, ſerenity, and clearneſs of the animal ſpirits; whereas the digeſtion is made with noiſe and ferment, and from that operation ariſe many vapours which infeſt and darken the animal ſpirits, in ſuch manner as the rational ſoul cannot well diſtinguiſh the figures of things. Nor was nature ſo inconſiderate to join in one place two actions that are perform'd with ſo great a repugnance and contrariety. Be it how it will, *Plato* mightily commends the providence and care of him who made us; for having ſeparated the liver at ſo great a diſtance from the brain, leſt by the noiſe made by the boiling and concoction of the food, and by the obſcurity and clouds caſt on the animal ſpirits by the vapours, the rational ſoul ſhould be diſcompoſed in reaſoning. However, if *Plato* had not remark'd this from philoſophy, we ſee it every hour by experience, for notwithſtanding the liver and the ſtomach are ſo very diſtant from the brain, yet none can ſit to ſtudy, with the ſame edification, immediately upon eating, as ſome time after.

WHAT ſeems moſt true in this matter, is, that the office of the fourth ventricle, is to digeſt and alter the vital, and reſolve them into animal ſpirits, for the end we have mention'd: and for this reaſon, nature has alſo ſeparated the three other, and has lodg'd it like a little brain by it ſelf apart, as is to be obſerved, leſt by its

operation, the ſpeculation of the other ſhould be diſturb'd. For as to the three little cells before, it is not to be doubted, but nature has made them to reaſon and diſcourſe; as clearly appears in deep ſtudy and muſing, which never fail to make that part of the head ake, which correſponds to theſe three cavities.

THE ſtrength of this argument appears, if we conſider, that even the other powers being fatigued in performing their office, always cauſe ſome pain to thoſe organs with which they are exerciſed: as after gazing too long a time, the eyes water, and after walking too much, the ſoles of the feet will ake. Now the difficulty is to know in which of theſe cells dwells the underſtanding, in which the memory, and in which the imagination; becauſe they are ſo cloſe and near neighbours, that one cannot well diſtinguiſh, or know it by the experience we even now ſpoke of, nor by any other token. Moreover, if we conſider, that the underſtanding can do nothing without the memory be preſent to it, to offer and repreſent to it the figures and ſpecies, (according to the ſaying of *Ariſtotle, He that underſtands has no more to do than reflect on the images*); nor the memory again, without being ſeconded by the imagination, as we have elſewhere noted; we may eaſily conclude, that all the three faculties are joined and united together in each ventricle; that the underſtanding is not by it ſelf in one, nor the memory by it ſelf in the other, nor the imagination by it ſelf in the third, as the vulgar philoſophers have thought. This union of powers and virtues uſes to be made in human bodies, when one cannot act without the concurrence of the other, as appears in the four natural virtues. The attractive, the retentive, digeſtive, and expulſive; which, to be of uſe one to the other, have, by nature, been aſſembled in one and the ſame place, and not ſeparated from each other.

BUT if all this be true, to what end has nature prepared thoſe three ventricles, and to each of them join'd all the three rational powers, ſince any one of the three was ſufficient for the underſtanding and the memory to play their parts? To this may be anſwer'd, That it is equally

equally difficult to know why nature has made two eyes, and as many ears, since in each of them the whole power of seeing and hearing resides, and one may see with one eye alone. To this it may be said, that how much greater the number of organs of the powers appointed and established for the perfection of the animal is, so much more assured is the perfection and possession of them; because by some accident one or two may fail, and then it is convenient, that there should be a supply from others of the same kind, which may be ready to act.

In the disease call'd the *Resolution, or Relaxation, of the sinews*, or *palsy of half the body*, the operation of the ventricle that answers to the sick-side, is usually lost, in such manner as if the two others remain'd not entire and unhurt, the man would be stupid and devoid of reason. And nevertheless, from the want of this ventricle alone, he is observ'd to be very weak, as well in the actions of the understanding, as of the imagination and memory: even as he who uses to see with two eyes, would be at a loss in his sight, if one of them was quite out. By which means it may be clearly understood, that in each ventricle, all the three faculties are found, since from the hurt of one only, all the other three are weakened.

Suppose now, that all the three ventricles are composed after the same manner, and that there is no diversity of parts to be found in them, we cannot be at a loss if we take the first qualities for the instrument, and so make as many differences of wit as there are of the first qualities. For it is against all natural philosophy to believe, that the rational soul being in the body can exercise her operations without the mediation of a corporeal instrument to assist her. But of the four qualities that appear, the heat, cold, moisture, and driness, all physicians reject the cold as of no use at all, in the operations of the rational soul: and accordingly it is observ'd by experience, in all the other powers of man, that where the cold over-ballances the heat, they are blunted and retarded in their offices; insomuch, as neither the stomach digests the meat, nor the muscles duly

move the body, nor the brain duly reasons and discourses. For which reason *Galen* said, *The cold manifestly incommodes and retards all the operations of the soul*; serving only in the body to allay the natural heat, and to hinder it from being inflam'd. But *Aristotle* is of a contrary opinion, where he says, *The thick and hot blood renders the man strong and robust, and the thinner and more cold of a more delicate sense and understanding*: whence it clearly appears, that from cold proceeds the greatest difference of wit in man, *viz.* the understanding. *Aristotle* therefore enquiring, why the men inhabiting hotter countries (as *Egypt*) are more subtle and ingenious than those who live in colder climates, makes answer, That the ambient heat being excessive, draws forth and consumes the natural heat of the brain, leaving it cold, which makes men more sharp: and that, on the contrary, the great ambient cold concentrates the natural heat of the brain, not suffering it to disperse: and farther, they who have very hot brains, says he, can neither reason nor discourse, but are volatile, never fixing in one opinion. *Galen*, as it seems, alluded to this, where he says, the reason why some change their opinions every moment, is, because they have very hot brains; and, on the contrary, they that have cold brains will be firm and steady in their opinions.

BUT the truth is, there is no difference of wit proceeds from this quality, neither could *Aristotle* mean, that the blood, cold in excess, made the understanding better, but only when it is less hot. When a man is fickle, it is true, it proceeds from too great a heat, that raises transient figures in his brain, making them ferment or boil as it were; by which means the images of many things represent themselves at once to the rational soul, awakening and inviting it to a consideration of them; by which means, very often, while she endeavours to enjoy all, she makes herself not effectually mistress of any, and is ever fluctuating and varying her purposes, as new ideas present themselves, before any one of 'em can be brought to perfection.

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THE quite contrary happens in cold, which renders a man fix'd and ſtable in opinion; becauſe it keeps the ideas faſt lock'd up, not permitting them to vary ſo faſt, and ſo repreſents no other image to a man but what is called for. Cold has this peculiar, that it retards the motions, not only of corporeal things, but alſo renders the intellectual figures and ſpecies immovable in the brain; but this firmneſs ſeems rather to be a certain dulneſs, than a difference of wit. There is another kind of ſteadineſs, which proceeds from the underſtanding being cloſer and more compact, and not from any coldneſs of brain.

DRINESS then, moiſture and heat, remain as inſtruments of the rational faculty: but not one philoſopher knew how, particularly, to aſſign to each difference of wit, the quality that ſerv'd it for an inſtrument. *Heraclitus* ſaid, *That the ſharpneſs of wit was from a dry light*. By which words he gives us to underſtand, that drineſs is the cauſe of the great prudence and wiſdom in man; but he has not ſhewn, in what kind of knowlege a man was excellent by means of this quality. *Plato* intended no leſs, when he affirm'd, That the ſoul upon its entring the body, was very wiſe, but that the great moiſture it met there, render'd it lumpiſh and dull, till as that moiſture wears off in age, and the body becomes drier, the ſoul diſcovers that knowlege and wiſdom it had at firſt. Among brute beaſts (ſays *Ariſtotle*) thoſe are more deliberate whoſe conſtitution is more cold and dry, as the ants and bees, who may diſpute for wiſdom with men that are reaſonable creatures. Beſides, there is not a brute beaſt more moiſt than a hog, and which has leſs wit: for which cauſe, the poet *Pindar* being to tax the *Bœotians* for blockheads, expreſs'd himſelf in this manner:

Dicta fuit ſus gens Bœotia vecors.

Stupid *Bœotians* wore the name
Of ſwine, their nature was the ſame.

And

And *Homer* informing us that *Ulyſſes* was always wiſe, feigns that he was never turn'd into a hog. *Galen* affirm'd alſo, That the blood by reaſon of its too great moiſture, made men ſilly: and recounts, that the comic poets accuſed *Hippocrates*'s children of it; alledging they had too much natural heat, which is a moiſt ſubſtance, and abounding with vapours. The children of wiſe men are not without this defect; of which I may hereafter aſſign the reaſon. Of the four humours we have, there is not one of them found hot and dry, but melancholy. And *Ariſtotle* affirms, That all the men that ever ſignaliz'd themſelves in the ſciences, were melancholic.

IN fine, all agree, that drineſs makes a man very wiſe; but no man ſhews which of the rational faculties it moſt favours. The prophet *Iſaiah* (*ch.* xxviii.) only determined it, when he ſaid, *Vexation gives underſtanding*, becauſe ſorrow and affliction, not only lick up that moiſture of the brain, but have alſo power to dry up the very bones, by which quality the underſtanding is made more ſharp and acute; according to the *Engliſh* proverb, *Neceſſity is the mother of invention*; which is chiefly demonſtrated in many men reduc'd to poverty and miſery, who have happen'd to ſpeak and write things worthy of admiration; but being afterwards raiſed by fortune according to their wiſh, have done nothing more of importance; whence alſo comes that other obſervation, that to make a *biſhop, is to ſpoil a good preacher*. For, a delicate life, content, a ſtream of fortune, and all things ſucceeding ſmoothly to our wiſh, much relax and moiſten the brain; and, as *Hippocrates* ſaid, enlarge and dilate the heart, giving it a ſweet and groſs heat: which is again eaſily prov'd; for if affliction and grief dry up and conſume the fleſh, by which means a man acquires a better underſtanding, it is certain, that the contrary, which is chearfulneſs, fails not to moiſten the brain, and impair the underſtanding. They who attain the laſt ſort of wit, are more diſpoſed to ſports, feaſts, muſic, frequenting merry company, and avoiding the contrary, which at other times were wont to give them reliſh and content. Hence the obſervation of the preacher, *Eccleſ.* vii. 4. *The heart of the wiſe is in the houſe of ſadneſs*

(of

of which the property is to dry); *but the heart of the fool is in the house of mirth* (of which the property is to moisten).

HENCE may the vulgar learn how it comes, that a wise and virtuous man, raised to great honour (who before was poor and humble) sometimes immediately changes his manners, and his way of reasoning; for this proceeds from his acquiring a new temperament, moist and full of vapours, by which means he effaces the figures he had before in his memory, rendering his understanding dull and sluggish.

'TIS very difficult to know what difference of wit proceeds from moisture, because it so strongly contradicts the rational faculty. At least, according to *Galen*'s opinion, all the humours of our body that are moist in excess, render the man stupid and ignorant, which occasion'd him to say, *The prudence and activity of the rational soul, arise from choler; integrity and constancy, proceed from the melancholic humour; simplicity and stupidity, from blood; phlegm, or water, serving for nothing but to feed sleep.* Insomuch, that the phlegm and the blood (so far as it is moist) no less conspire to ruin and destroy the rational faculties; but this is to be understood of the discursive and active faculties, and not of the passive, as the memory is, which depends on moisture, even as the understanding does on driness.

NOW we call the memory a rational faculty, because without it the understanding and imagination are of no use. It affords them matter, and furnishes them with figures to reason, according to that of *Aristotle* before quoted, *He that understands does no more than reflect on the images.* And the proper office of the memory is to lay up those figures for the understanding when it would reflect on them; and therefore if that be lost, it is impossible for the other faculties to perform their function. *Galen* says, the office of the memory is no other than to keep the figures of things, without having any invention of its own: *The memory*, says he, *treasures and lays up the things which are transmitted from the sense and understanding, as in a coffer, or repository, having no invention of its own.* This being its office, one

one may clearly perceive it depends much upon moisture, which softens and prepares the brain, for the figures that are imprinted by way of compression. Childhood is an evident proof of this doctrine; seeing, in that age, the memory is readier than in all the other, because the brain then is moistest. *Aristotle* therefore demands, *Why the old have more wit and a better understanding, and the young learn with greater facility?* To which he makes answer, That the memory of old people is filled with so many images of things which they have seen and heard during the long course of their life, that there is no room left to receive any thing new; but that of children meets with no difficulty therein, which makes them receive and retain immediately all that is told and taught them. And this he farther illustrates, by comparing the morning and evening memory, and shewing, that we learn better in the morning, because we then rise with a fresh memory, than in the evening, because it is then stuffed with all the objects of the day past. But this great philosopher did not sufficiently attend to the point in hand; and it ought not to be wonder'd at, if we find persons of less wit and sagacity than *Aristotle*, form better arguments than his, in some particular cases which they have made their study: and *Plato* does very well, when he advises such as read his works, to consider them with great care, and not to rely too much on the good opinion they have conceiv'd of them; *Because it would be a great shame*, says he, *that nature having given me eyes to see, and an understanding to distinguish, yet I should ask* Aristotle, *and the other philosophers, what are the figures and colours of things, and what being and nature they have. Open your eyes then*, adds he, *make use of your wit and ability, and fear nothing; for the same God that made* Aristotle *made you also; and he who formed so great a wit, is equally able to form a greater.* I instance not this to lessen the veneration which we ought to have for excellent authors, but to stimulate every one to make improvements by the strength of his own genius and observation, and not to depend, implicitly, on the studies of others; for if the great *Aristotle*, of whom we are speaking, and

other

other mighty genius's, had taken things upon truſt, we ſhould have wanted the many wonderful lights and diſcoveries which we owe to their indefatigable ſtudies. By the improvements made ſince their time we may hope for ſtill greater; and to make a ſlaviſh dependance on the opinions of our predeceſſors, can only ſerve to increaſe our faith, and not improve our knowlege.

SINCE then the anſwer *Ariſtotle* gave to the problem ſatisfies me not, I am oblig'd to give a reaſon, why my underſtanding will not admit it; and the reaſon is very clear, for if the ſpecies and figures which are in the memory had matter and quantity to poſſeſs place, his anſwer would have been good; but being indiviſible and immaterial as they are, they can neither fill nor vacate the place where they are. Nay, we ſee by experience, the more the memory is exerciſed in receiving every day new figures, the more capable ſhe is to receive them. According to my doctrine, the anſwer to the problem is very eaſy; for I ſhould chuſe to ſay, that old men have a good underſtanding, becauſe they are very dry; and that they have no memory, becauſe they have no moiſture: by which means the ſubſtance of their brain is harden'd, ſo that they cannot receive the impreſſion of figures, neither more nor leſs, than hard wax receives with difficulty the figure of the ſeal, while the ſoft receives it with great facility. Among young people the contrary happens, who from abundance of moiſture of the brain, want underſtanding, and have a good memory, becauſe of the ſoftneſs of the ſame brain, in which, by reaſon of the moiſture, the figures and ſpecies from without, make a good, firm, eaſy, and deep impreſſion.

THAT the memory is better and readier in the morning than evening, is not to be denied, but not for the reaſon *Ariſtotle* gave juſt now. The night-ſleep is the cauſe of it, that moiſtens and ſtrengthens the brain, which by the waking of the whole day dries up and hardens. Therefore *Hippocrates* ſaid, *They that deſire to drink in the night, being very dry, if they ſleep upon it, it is good*; and the drought goes off, becauſe ſleep moiſtens the body, and fortifies the ruling faculties of man. But that ſleep produces ſome effect, it follows clearly from this

this doctrine; *Ariſtotle* himſelf confeſſes, That the underſtanding and the memory are oppoſite and contrary faculties; ſo that he who hath a great memory, may want underſtanding; and on the other hand, he who has a better underſtanding, may not have a good memory; becauſe it is impoſſible for the brain to be moiſt and dry at the ſame time, in an intenſe degree. *Ariſtotle* built upon this maxim, to prove that the memory is a different faculty from remembrance, and forms his argument after this manner. Such as have a great remembrance are men of great underſtanding, and thoſe who have a good memory, want underſtanding; the memory and remembrance then are two contrary powers. According to my doctrine, the firſt propoſition is falſe, becauſe they who have a great remembrance want underſtanding, but are maſters of a large invention, as I ſhall preſently prove: But the ſecond propoſition is true, tho' *Ariſtotle* did not know the reaſon upon which he grounded the contrariety between the underſtanding and the memory.

THE *imagination* ariſes from heat (which is the third quality) becauſe as there remains in the brain no other rational faculty, ſo have we no other quality to aſcribe to it. For the ſciences appertaining to the imagination, are the exerciſe of them that rave in their ſickneſs, and not the ſame with thoſe which belong to the underſtanding and memory. And ſuppoſe that phrenſy, madneſs, and melancholy, are the over-heated paſſions of the brain, we may thence draw a ſtrong proof, that the imagination conſiſts in heat. There is but one thing in which I find ſome difficulty, which is, that the imagination is contrary to the underſtanding, and to the memory alſo; and the reaſon is not clear'd by experience, becauſe great heat and drineſs may well enough meet in the brain in an intenſe degree, and ſo may great heat and moiſture; inſomuch, that a man may have a good underſtanding with a great invention, and a happy memory with a vaſt invention; and yet nevertheleſs it is a wonder to find one of a great invention, who has neither a good underſtanding nor a good memory. The reaſon of which is, that the underſtanding requires that the brain

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be compoſed of very ſubtle and delicate parts, as we have elſewhere prov'd from *Galen*, and that a great heat diſcuſſes and conſumes the more delicate parts, leaving behind thoſe that are more groſs and earthy. And for the ſame reaſon, a good invention cannot be coupled with a great memory, becauſe the exceſſive heat diſſolves the moiſture of the brain, leaving it hard and dry; by which means it cannot ſo eaſily receive the figures.

So that, upon the whole, there remain no more than three principal differences of wit to be found in man, becauſe there appear but three primary qualities, whence they can proceed. But under theſe three general differences are contain'd many other particular ones, by reaſon of the ſeveral degrees, that heat, moiſture, and drineſs may produce: yet is it not preciſely true, that from every degree of theſe three qualities reſults a different wit; becauſe the drineſs, heat, and moiſture, may exceed to ſuch a degree as the whole rational faculty may be renſvers'd; according to that aphoriſm of *Galen*, *Every exceſs of temperament diſſolves the powers:* a thing moſt certain; for altho' the underſtanding be advantaged by drineſs, yet nevertheleſs that drineſs may be in ſuch exceſs, as to incommode its operations: which, neither *Galen* nor the ancient philoſophers allow of; for they, on the contrary, aſſure us, That if old mens brains were not over cold, they would not decay, tho' they were dry even in the fourth degree. But they are miſtaken in this, as appears by what we ſhall prove from the imagination, for tho' its operations are performed by means of heat, as ſoon as it is paſt the third degree, that faculty forthwith begins to decay; and the ſame equally happens to the memory from too great a moiſture.

Now I cannot ſay in particular how many differences of wit ariſe by reaſon of the intenſe degrees of each of theſe three qualities; but I muſt firſt deduce, and recount all the operations of the underſtanding, imagination, and memory. You are to know then, that there are three principal actions of the underſtanding: the firſt is, to diſcourſe; the ſecond, to diſtinguiſh; and the third, to chuſe. And theſe conſtitute the three differences of the underſtanding. The memory is likewiſe divided into three

three other; into that which readily receives, and as ſoon loſes; that which difficultly receives, but long retains; and that which eaſily receives, and is long a loſing.

THE imagination comprehends many more differences; for it has three of them, as well as the underſtanding and the memory, and from each degree ariſes three others. We will hereafter ſpeak more diſtinctly of them, where we ſhall aſſign to each the ſcience that anſwers it in particular.

BUT he that would conſider the three other differences of wit, ſhall find, that there is one ſort of abilities that naturally diſpoſes perſons to the clear and eaſy parts of what they learn; but when they proceed to the ſubtle and obſcure, it is equally in vain for the maſter to break his brains to teach them to conceive thoſe points by proper examples, as that they themſelves ſhould ſtrive to form an idea of them in their imaginations; for they have no capacity for them. In this rank are all the half-witted in all ſciences whatever, who being examined in the obvious points of their art, anſwer all they underſtand with perſpicuity and eaſe; but being put to the very delicate and ſubtle part, utter a thouſand abſurdities.

A SECOND ſort of them are which riſe a ſtep higher; for they are docile, and readily receive the impreſſion of all the rules and conſiderations of the art, whether clear or obſcure, eaſy or difficult; but the doctrine, the arguments, the anſwers, the doubts, and the diſtinctions, all theſe coſt them a great deal of trouble and pains; theſe have need to learn the ſcience from able maſters, who know a great deal, to have abundance of books, and be aſſiduous in ſtudy; becauſe whatever they know or learn, they muſt take it from another, and beyond that, have no invention of their own.

BUT then there are a third ſort of wits, that nature makes ſo perfect, that they are hardly in any want of a maſter to direct them to reaſon; for from any remark the maſter ſhall ſlightly have dropt, they raiſe ſtrait a thouſand conſiderations of their own, which never having been taught them, appears like inſpiration to every one,

one, that with ſurprize finds their mouths fill'd with ſo much knowlege. Of all others, theſe inventive genius's are the fitteſt to write books; for 'tis requiſite, that to the end the ſciences may receive daily improvement, and advance nearer to perfection, that the inventions of theſe fertile wits ſhould be communicated to the world; and indeed the performances of all others, eſpecially of the two other claſſes of wit, ſhould be greatly diſcourag'd by the public, and only thoſe of this ſpecies encourag'd; for all that the former can give us, are but collections and bare repetitions of what is to be found in authors before: and while they play the plagiaries, ſtealing from one and another, there is none of them compoſes a work of his own. The inventive wits are term'd, in the *Tuſcan* tongue, *Capricious*, for the reſemblance they bear to a goat, who takes no pleaſure in the open and eaſy plains, but loves to caper along the hill-tops, and upon the points of precipices, not caring for the beaten road, or the company of the common herd. While the cramp'd and fetter'd ſort of thoſe we have mention'd, never go beyond one ſpeculation, as if they imagined there was nothing more in the world to know. Theſe have a ſheep-like quality, who never quit the ram's walk, but content themſelves to tread the common path, and even go not forward there, except ſome bell-weather of the herd go before them, and point out the dull, eaſy way.

THESE inventive and fertile ſpecies of wits, are of great advantage to the maſter of a ſchool, to be plac'd at the head of the other two; for, as in a great flock of ſheep, the ſhepherds are uſed to ſtimulate or prick forward a ſelect number of goats to the ſearch of freſh paſtures: even ſo it is no leſs requiſite in human learning, there ſhould be ſome of theſe *capricious* wits to diſcover to ſlow and ſheep-like underſtandings, new ſecrets of nature, and raiſe them to exerciſe themſelves in ſpeculations they would otherwiſe have no notion of; whereby all the uſeful arts are improv'd, and men yet unborn ſhall be edify'd by the labours of thoſe who went before them.

CHAP.

CHAP. IX.

Some doubts and arguments againſt the doctrine of the laſt chapter, anſwer'd.

ONE of the reaſons why the wiſdom of *Socrates* has been ſo celebrated even to this day, was, That after he had been pronounc'd by the oracle of *Apollo* the wiſeſt man in the world, he ſpoke thus: *This only I know, that I know nothing*; intimating thereby, the little certainty there is in human ſciences; ſince, it is found by experience, that all is full of doubts and diſputes; to which purpoſe is that ſaying, *The thoughts of men are full of doubts, and all their foreſight uncertain.*

GALEN made the like reflection, when he ſaid, *That the knowlege of the nature of occult things was not to be found among the philoſophers, and yet much leſs in the art of phyſic; and to ſay all in a word,* ſays he, *it is unknown to men.* By which he would ſeem to intimate, That philoſophy and phyſic are, of all ſciences, the moſt uncertain: And if this be true, what ſhall we ſay to the philoſophy here handled, in which we have pretended to make an anatomy of the powers and faculties of the rational ſoul, than which nothing can be more obſcure, or clogg'd with greater doubts and difficulties? ſome of which, as they occur to me, I ſhall ſtate and obviate: And,

Firſt, IT may be objected, That the drineſs of the brain, to which we have imputed the cauſes of the acts of the underſtanding, ſuppoſes that this faculty ſtands in need of corporeal organs to exert it ſelf; which is contrary to the opinion of *Ariſtotle,* who proves, by reaſons not to be eaſily anſwer'd, That the underſtanding is not an organic faculty; becauſe to this faculty belongs to

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know and understand the nature and being of all the material things in the world; insomuch, that if it were united with any corporeal thing, that very union would hinder the knowledge of all others; as we see in the exterior senses, that if the taste be bitter, whatever the tongue touches has the same savour; and if the crystaline humour be green or yellow, the eye judges whatever it sees to be of the same colour; and the cause of it is, that *inward tinctures bar the entrance of objects from without*. *Aristotle* said also, That if the understanding were united to any corporeal instrument, it would be susceptible of a material quality, because that which is united to it, be it hot or cold, must necessarily have communication with heat or cold. But to say the understanding is hot, cold, moist, or dry, is a proposition abominable to the ears of any natural philosopher.

But to this we answer, That it must be consider'd there are two sorts of understanding in man, one of which is the power in the rational soul, and that is as incorruptible as the rational soul it self, without depending in the least upon the body or its material organs, either for its being or preservation; and *Aristotle*'s arguments have only place, with regard to this power. The other sort of understanding is all that which appears necessary in the brain of man, to the end he may understand as he ought: 'Tis in this sense we use to say *Peter* has a better understanding than *John*, which cannot be taken for the power lodged in the soul, because it is of equal perfection in all, but rather for some of the organic powers, which the understanding makes use of in its acts; some of which it performs well, and others ill; not at all through its own fault, but because the powers it makes use of in some, find good organs, and the contrary in others. Which is to be understood in no other manner, since we find by experience, not only that some men reason better than others, but even that the same person reasons and discourses well at one age, and ill at another, as we have already prov'd. Nay, there are some who lose their judgment, even as others recover it, from certain distempers of the brain: which is particularly seen in the hectic fever; for when that

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once reaches the brain, the ſick perſon begins to ſpeak and reaſon more judiciouſly than he uſed, and how much the deeper that evil gets root, ſo much the more excellent are the operations of the underſtanding; which was not conſider'd by ſome of the ancient phyſicians, tho' this knowledge be of great importance in the firſt appearance of the diſeaſe, when the cure is eaſy.

BUT what theſe organic powers are, of which the underſtanding makes uſe in its operations, has not yet been reſolv'd or determin'd, ſeeing the natural philoſophers ſay, that if one man reaſons better than another, it comes from the underſtanding's being an organic power, and better diſpos'd in one than another, and not for any other reaſon: for rational ſouls and their capacities (when ſeparated from their bodies) are of equal perfection and knowledge. And *Ariſtotle* himſelf gives weight to this argument, when he proves that the underſtanding is better, as the memory is worſe; and on the other hand, that the more the memory advances and riſes to a point, the more the underſtanding fails and declines; and therefore *Ariſtotle* demands, Why the old have ſo bad a memory, and ſo good an underſtanding; and the young a good memory, with a bad underſtanding? Experience alſo furniſhes us with inſtances, that when the temperament and good diſpoſition of the brain are deſtroy'd by ſickneſs, we often loſe the uſe of the operations of the underſtanding, while thoſe of the memory and imagination remain unimpair'd; which could never be, if the underſtanding had not a particular inſtrument by its ſelf, diſtinct from that of the other powers. What I ſhall anſwer to this, is, That when the brain is obſerv'd to be moiſter than it ſhould, the eaſineſs to receive and retain in the memory improves; but when the repreſentation of the ſpecies is not ſo vivid, nor ſo good, it is, without compariſon, better effected with drineſs, which is light and clear, than with moiſture, which is dark and troubled; inſomuch, that the underſtanding fails in its operations, from the clouds and obſcurity of the ſpecies. Quite contrary, thoſe who are of a dry brain, have not a memory that receives and retains well; but in recompence, are provided with an imagi-

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nation which helps them to ſee clearly the figures, becauſe of the light which attends the drineſs, and it is that of which the underſtanding has moſt need, according to *Heraclitus*'s ſaying, *The dry light makes the ſoul wiſe*. What darkneſs, and what miſts, moiſture ſpreads over the objects, and what light, drineſs brings along with it, may be eaſily obſerved in the night, when the ſouth and north winds blow: the firſt darkens and overcaſts the ſtars, and the other renders them bright and clear. The ſame things fall out with regard to the figures and ſpecies in the memory, inſomuch that it is not to be admired, that the underſtanding ſometimes blunders, and ſometimes hits right, according as theſe ſpecies and figures which it makes uſe of in ſpeculation, prove either clear or obſcure, without any neceſſity of its being therefore a faculty tied to its organs, or of any defect to be imputed to it.

Some natural philoſophers have pretended, that the incorruptibility of the heavens, their clearneſs and tranſparency, as well as the ſparkling of the ſtars, was owing to the great drineſs of their compoſition. 'Tis for the ſame cauſe old men reaſon ſo well, and ſleep ſo ill; becauſe, ſay I, of the great drineſs of their brain, which is in a manner clear and tranſparent, and the ſpecies and figures as ſparkling as the ſtars. And as drineſs hardens the ſubſtance of the brain, from thence comes it, that they learn ſo ill by heart: on the contrary, children have a good memory, ſleep well, and reaſon ill, becauſe of the great moiſture of the brain, which renders it ſoft, dark, full of vapours, clouds, obſcurities, and the ſpecies troubled and unclear, which preſenting in that condition to the underſtanding, make it commit errors, through the defects of the object, rather than its own. In this conſiſts the difficulty found by *Ariſtotle*, in joining a good underſtanding with a great memory, and not from the memory's being contrary to the underſtanding. For if we conſider well, we ſhall find, there is no faculty ſubſervient to ſo many operations of the underſtanding, as the memory; for ſo long as that has not ſomething that keeps it

employ'd, in representing the figures and species, the man remains imperfect and stupid. 'Tis even as *Galen* reports, that in a certain plague that happen'd in *Asia*, the men lost their memory to that degree, that they forgot even their own names; many forgot also what they had learn'd in the arts and sciences, insomuch, that they were obliged to study them again, as if they had never learn'd them at all. Others also forgot their language, being unable either to speak, or reason, for want of memory. It was upon this occasion, said *Plato*, that the antients raised temples and altars to *Memory*, adoring her as the goddess of the sciences; for thus he speaks: *But besides the Gods thou hast brought me, there must be others also invok'd, and especially Memory, which gives the chief weight and ornament to our discourse, to the end that we may publickly acquit ourselves well of our charge.* In which he had great reason; for a man knows not in how many things the same faculty has in store for him, it being no less than the treasury of the sciences. Now, as we shall elsewhere prove, when the brain is well temper'd, and no quality exceeds the others, a man has at the same time a good understanding with a great memory; which could not fall out, if these two faculties were exact contraries.

2*dly*. 'Tis objected, That *Aristotle*, and all the peripatetics, have added to the three powers, which we have asserted to be the original of human wit (*viz*. the *Understanding*, the *Imagination*, and the *Memory*) two others, to wit, *Remembrance* and *Common Sense*, in pursuance of this rule, *The faculties are discern'd by their acts:* and that therefore the wit of man arises from five faculties instead of three.

IN answer to which, 'tis to be observed, that all difference of actions does not shew a diversity of powers; for, as we shall prove hereafter, the imagination performs such strange actions, that if this maxim were true, there would be more than ten or twelve several powers in the brain: but because all these actions agree in one kind, they denote but one imagination, which afterward is divided into several particular differences, because

becauſe of the diverſity of actions it performs. To compoſe the ſpecies in the preſence or abſence of the objects, not only does not conclude that there are ſome different generical powers, as are the common ſenſe and the imagination; but alſo that the ſame are no particular faculties.

3*dly*. It may be objected to us, that whereas in the preceding chapter, we have compared the office of memory, in the words of *Galen*, to a coffer or repoſitory, which is of no other uſe than to treaſure up the things that are repoſited there; in this caſe, there will be ſtill need of another faculty to draw out the figures from the memory, and repreſent them to the underſtanding, even as 'tis neceſſary for a hand to open the coffer, to take out what was laid up in it.

To which I anſwer, That the memory may be conſidered under two heads; the one, as a faculty that has its ſubject in the rational ſoul; and the other, as it regards a corporeal organ, which nature has framed for it in the brain. For the firſt, it belongs not to the juriſdiction of natural philoſophy, but to the metaphyſician, from whom we ought to learn what it is. For the ſecond, it is a thing ſo difficult to conceive, after what manner one man is furniſhed with a great memory, and another has none at all, and what inſtruments nature has made in our head, to make us recollect what is paſt, that natural philoſophy is driven to invent and ſearch out for ſimilitudes to make it underſtood. *Plato*, for example, compares the imagination to a writer, and the memory to blank paper, and declares, That as the writer ſets down in paper thoſe things he would not forget, and reviſes them after he has put them in writing; in the ſame manner it muſt be underſtood, that the imagination imprints in the memory the figures of things, which the ſenſes and the underſtanding have been acquainted with, as well as thoſe others which ſhe herſelf invents; and when it would recollect them, *Ariſtotle* has ſaid, it returns to review and revolve. *Plato* made uſe of this compariſon, when he declared, That in apprehenſion of the failing of his memory in his old age,

he was diligent in substituting another of paper (which was his books) that he might not lose his labour, but upon each review, it might anew be represented to him; the imagination does no more, as often as it imprints in the memory, and reads it over again, whenever it is to recollect itself. *Aristotle* was the first that broach'd this opinion, and *Galen* the next, who spoke after this manner. *For the part of the soul that imagines, which ever it is, it seems to be the very same that remembers.* And this appears plainly, in that the things which we imagine with much intention of mind, sink deeper into the memory, and those of which we think but slightly, are soon forgot. And as the writer, when he has writ a fair letter, reads it easily, and without mistake; even so it fares with the imagination; for if it stamp them with force, the figures remain well imprinted and mark'd in the brain, otherwise they are hard to be distinguished. The same also befalls old writings, of which, part remains sound and fresh, and part is worn out by time, and cannot well be read, unless the defects are supplied by guess: the imagination precisely takes the same course, when some figures are effaced in the memory, and others retain'd. Whence sprang *Aristotle*'s error, who, for no other reason, believ'd that remembrance was a different power from memory. Besides which, he said, that those who have a great remembrance, have a good understanding, which is equally false; because the imagination, whence the remembrance proceeds, is contrary to the understanding: For to fix things in the memory, and to remember them after they are known, is an act of the imagination, even as writing any thing, and reading it afterwards, is an act of the writer, and not of the paper. According to which, the memory is a passive, and not an active power, as we intimated before, as the blank paper is no more than a capacity for one to write on.

4*thly*. IT may be objected, That if it be true, as we have asserted, that the understanding and memory were two contrary powers, and that one required much drieness, and the other much moisture and softness of

of brain, how comes it to paſs, that both *Plato* and *Ariſtotle* affirm, That men of ſoft fleſh have a great deal of underſtanding, ſince ſoftneſs is an effect of moiſture?

But this difficulty may be thus ſolv'd: That it imports nothing to a man's wit, whether the fleſh be hard or ſoft, if the brain enjoy not alſo the ſame quality; for that, we obſerve very often, poſſeſſes a temperament diſtinct from that of all other parts of the body. Nay, even when the fleſh and the brain are both alike tender and ſoft, it is a bad indication for the underſtanding, and no leſs for the imagination. Be it as it will, if we conſider the fleſh of women and children, we ſhall find, that it is ſofter and more tender than mens, yet nevertheleſs men are for the moſt part of a better wit than women. The natural reaſon of which, is, that the humours that make the fleſh ſoft, are phlegm and blood, becauſe both the one and the other are moiſt (as we have already noted) and of theſe humours, *Galen* has pronounced, that they make men ſilly and blockiſh: on the contrary, the humours which harden the fleſh, are choler and melancholy, whence proceed the wiſdom and knowledge of men. So that to have ſoft and delicate fleſh, is a worſe ſign than to have dry and hard. And accordingly among men that are of an equal temperament, throughout the whole body, it is very eaſy to gueſs at the difference of their wit, from the ſoftneſs or hardneſs of the fleſh; for if it be hard and rough, it preſages a good underſtanding, or a good invention; but if ſoft and delicate, it denotes the contrary; which is a good memory with little underſtanding, and leſs invention. To diſcover then if the brain correſpond with the fleſh, the hair ought to be conſidered; for if that be thick, black, harſh, and curl'd, it is a ſign of a good invention, or a good underſtanding; but if lank and ſoft, it is an indication of a good memory, and nothing more. But he that would know, and diſtinguiſh, whether it be underſtanding or imagination, which is betoken'd when the hair is ſuch as we have mentioned, muſt conſider how the youth behaves himſelf in laughing; for that

paſſion ſtrongly diſcovers if the imagination be good or bad.

WHAT the cauſe of laughter is, many philoſophers have pretended to know; but not one has made it intelligible: they only all agree in this, that the blood is the humour that provokes a man to laugh, though none of them have told us what are the particular qualities of this humour, that make a man ſubject to laughter. *In a phrenſy the laughing fits are ſecurer, and the crying fits more deſperate*; for the firſt is made by means of the blood, which is a very benign humour; but the other is no leſs than an effect of deep melancholy. But we grounding only on the doctrine we have handled, may eaſily underſtand what is to be known in this matter. The cauſe of laughter is no other (in my opinion) than a tacit allowance of the imagination, when it ſees or hears ſome rencounter or accident, which proves very agreeable. And as this power reſides in the brain, when any of thoſe things preſent, it is ſtrait moved, and with it the muſcles all over the body; ſo we often approve ſharp and witty ſayings, by a nod of the head. But when the imagination is very good, it is not gratified with every paſſage, but with thoſe only, which are very pleaſing; and if they are not ſuch, it receives rather a diſguſt than pleaſure. Whence it comes, that we ſeldom ſee men of good invention laugh; and what is yet more conſiderable, is, that thoſe who rally the moſt agreeably, and are very facetious, never laugh at their own jeſts, or thoſe of others; becauſe they have ſo delicate and fine a fancy, that their own witty expreſſions, and railleries, are not moving to themſelves, nor have all the agreeableneſs and grace they have with others, who being incapable of the like, are more affected with what appears to them equally new and ſurprizing. For which reaſon, the thing ſpoken, or offered, ought to be new, and unheard-of. Which is not the aim only of the imagination, but alſo of the other ruling powers in man. Accordingly we find the ſtomach nauſeates the ſame food it received twice; the ſight, the return of the ſame figure and colour; the hearing, the repetition of the ſame tune,

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though it be good; and ſo even the underſtanding is tired with the ſame thought. Therefore he that rallies well, laughs not at all at his own witty jeſts, becauſe, ere they proceed out of his mouth, he knows well enough before-hand what he is to ſay. Whence I conclude the great laughers, and ſuch as, let the jeſt be what it will, are extreamly moved and tickled by it, want imagination. And therefore thoſe who are very ſanguine, as they have a great deal of moiſture, which we have affirm'd to be contrary to, and deſtructive of the imagination, ſo they alſo are very great laughers. Moiſture has this peculiar, that becauſe of its ſmoothneſs and ſoftneſs, it blunts the edge, and allays the heat; accordingly that agrees beſt with drineſs, becauſe it quickens its actions; add to this, that where moiſture is found, it is a ſign that the heat is ſlack and moderate, becauſe it cannot reſolve and conſume it, nor can the imagination with ſo weak a heat ſpeed its own operations. From whence alſo it follows, that men of great underſtanding are often great laughers, becauſe they want invention. As we may read of that great philoſopher *Democritus*, and many others whom I have ſeen and obſerved. Thus by means of laughter we may diſcern, if the perſons that have hard and rough fleſh, and beſides that, black and crilp, harſh and hard hair, generally excel in the underſtanding, or imagination. So that *Ariſtotle* has been miſtaken in what regards the ſmoothneſs or ſoftneſs of the fleſh.

5thly, To what we have advanced, That to have a good memory, the brain muſt be moiſt and ſoft, becauſe if it were dry and hard, the figures cannot be ſo well impos'd thereon; 'tis objected, That however the figures are eaſily impreſs'd on a ſoft brain, a dry and hard one is neceſſary to make the impreſſions durable, and that while the one eaſily take their learning, and as eaſily forget it, as if the impreſſion, as *Galen* ſays, were graved on water, the other, though more difficult to apprehend, never loſe what they have once learned; and therefore on the whole, to learn readily, and retain long, ſeem incompatible qualities, and which never, or very rarely, meet in the ſame perſon.

To this objection 'tis answer'd, That there are two sorts of moisture in the brain; one, which proceeds from the air, when that element is predominant in the composition; and the other from water, by means of which, the other elements are blended together.

IF the brain partake of the first moisture, the memory will be very good, easy to receive, and strong to retain the figures long, because the moisture of the air is very oily, and unctuous, in which the species of things fasten strongly, as may be seen by painting in oil, which, exposed to the sun, or cast into the water, sustains no damage; and if we rub a writing all over with oil, it hardly ever wears out. And even that which is obliterated to that degree, that one cannot read it, is made legible by oil, which gives it a kind of clearness and transparency. But if the smoothness and softness of the brain proceed from any other humour, the argument is strong; for if it receive easily the figure, it also as suddenly wears out, because the moisture of the water has no oil, to which the species could adhere. These two kinds of moisture are distinguished in hair; that which proceeds from air, makes them thick, oily, and greasy; and that from water, slimy and limber.

6thly, 'TIS objected, that 'tis no less difficult to understand how so many figures, as we affect, can be imprinted together in the brain, without effacing one another; for if several seals of different forms are imprinted on wax, the last will force out the rest, or at best there will remain behind only a promiscuous confusion of figures.

TO this we may answer, That the figures of things in the brain are not imprinted there like the figure of the seal in the wax, but only by penetrating, remain there fix'd; or after the manner as birds are caught with birdlime, and flies with honey, because these are not corporeal figures, and cannot be blended, nor break in one upon another.

7thly, IT may be objected, How can the memory, by constant exercise, be made more capable to receive the figures, when 'tis certain, that the exercise of the mind,

mind, as well as of the body, dries and consumes the flesh?

But this can be only said, to any prejudicial degree, of immoderate exercise, as well with regard to the body as the mind; for all physicians hold, and 'tis agreeable to the reason of the thing, and to experience, that moderate exercise fattens: And 'tis farther certain in both cases, that habit or use improves both; for porters backs, by frequent burthens, chairmens legs, labourers hands, and watermens arms by exercise, grow more brawny and tough, and more capable of sustaining the fatigues of their respective vocations; and in like manner the faculties of the mind, and the memory among the rest, by moderate exercise and study, may receive great advantages and improvements, as is daily experienced, more especially by every one who has the care of the education of youth.

8*thly*, 'Tis difficult, say the objectors, to discern how the imagination is contrary to the understanding, as we asserted, if there appear no stronger reason, than to say, that the subtile parts of the brain are resolved and discussed by much heat, and that there remain behind the grossest and most earthy, since melancholy is allow'd to be one of the grossest and earthiest humours of the body; yet *Aristotle* said, The understanding received more advantage from that, than from any other. The difficulty of accounting for this seems yet greater, when we come to consider, that melancholy is a gross, cold, and dry humour; of all which properties, that of dryness only is favourable to the understanding, those others of grossness and coldness being extremely opposite to it; while choler is of a delicate substance, and of a hot and dry temperament, and is only contrary to the understanding in that one property of heat. Which was the reason that *Galen* ascribes wit and prudence rather to the latter than to the former.

But to this may be replied, That there are two kinds of melancholy, one natural, which is as it were the cement of the blood, whose temperament is cold and dry, of a very gross substance, and of no advantage to the wit, but makes men fools, sots and

giglers, because of a defect in their imagination. The other, call'd *Atra-bilis*, black or burnt choler, which, according to *Aristotle*'s opinion, made the wisest men, whose temperament is various, but always dry, and of a very delicate substance. *Horace* reports *Orestes* to have been made such a one, but that he would do no harm to any one, speaking very fine things from the brightness of his choler, and therefore he said, *Fussit quod splendida bilis. Serm.* III. *Cicero* own'd, he had a slow wit, because he had no adust choler, and he spoke truth; for if he had, he would not have proved so eloquent; for the men of black choler, want memory, which is generally supply'd by volubility of speech. It has another quality, which mightily helps the understanding, that is to be as resplendent as an agat, by means of which splendor, the brain is illuminated, to the end the figures may be clearly reflected. And this *Heraclitus* meant, when he said, *A dry light makes a most excellent wit*; which splendor, the natural melancholy has not; for the black choler peculiar to that, is sleep and death.

As to *Galen*'s ascribing the dexterity of wit and prudence to choler, he was certainly much in the right, if he meant that sort of dexterity which the *French* call *Finesse*, and We in *England* Wilines, Cunning or Craft; and to this *Democritus* alluded, when being visited by *Hippocrates*, who finding him under a *Plane-tree*, bare-legg'd, and sitting on a stone, surrounded with dead and flead apes, foxes and serpents, and asking him the meaning of this sight, *Democritus* said, That he had been in search of the humour that made men fickle, crafty and deceitful, and that in dissecting those brute beasts, he had found reason to impute these mischievous qualities to choler.

But there is another sort of wisdom, which is indeed the only true wisdom, attended with uprightness and simplicity, by which men follow that which is good, and avoid that which is evil. *Galen* says this kind belongs to the understanding, because that faculty is wholly incapable of craft or malice, and is upright, just, frank and innocent. The man who is endow'd with

with this kind of wit, is called upright and ſimple, and is intirely unacquainted with the little, ſubtle, undermining artifices of the other. Of this kind of wiſdom, the coldneſs and dryneſs of melancholy, is a very proper inſtrument, provided it be compoſed of very fine and delicate parts.

Laſtly, 'Tis demanded, Whence it comes that the aſſiduous application to ſtudy and ſpeculation, renders many knowing and wiſe, who, at the beginning, appeared not to have the requiſite temperament for attaining learning, which if they had had, they needed not to have taken ſo much pains?

To which we reply, That when a man is engaged in the contemplation of a truth he would know, and does not preſently attain it, it may be becauſe his brain is not, at that time, matur'd, as one may ſay, for that particular ſtudy; but fixing a while in contemplation, as ſoon as the natural heat (that is in the vital ſpirits and arterial blood) flies to the head, the ſame cauſes the temperament of the brain to riſe till it arrive at the degree it has occaſion for. But however, this is to be ſaid only of thoſe who may be called *ſlow Wits*, and have the ſeeds of this good temperament in them, which may be produced by labour and proper cultivation, and relates not to ſuch as are utterly incapable of improvement; for 'tis to be obſerved, that much plodding does good to ſome, and harm to others; for if the brain be qualified to attain the due degree of heat, there will be no occaſion for deep meditation; and if it paſs beyond the point, the underſtanding is ſtrait diſordered, by an overflow of too many vital ſpirits; by means of which, it attains not to the notice of the truth it is in ſearch of. Whence it comes, that we obſerve many men ſpeak very well *extempore*, but perform very meanly with premeditation. On the contrary, others have ſuch a ſlow capacity, becauſe of their great coldneſs or dryneſs, that of neceſſity the natural heat muſt be a long time in the head to cauſe the temperament to riſe to the degree it wants, and therefore they acquit themſelves much better, when they have had

time to recollect what they have to say, than when they are to speak *extempore*.

CHAP. X.

Each difference of Wit is appropriated to the Science with which it most particularly agrees. Brief Instances thereof.

ALL the arts (said *Cicero*) are settled upon certain universal principles, which being learned with study and labour, the science at length is acquired. Only the art of poetry has this in peculiar, That if God and Nature make not the man a poet, he will never be enabled by rules and precepts to make a verse, which occasioned him to say, *That the study and knowledge of other things depend upon the precepts of art; but the Poet is so by nature; he is only excited by the force of his wit, and is, as it were, inspired with a divine enthusiasm.* But in effect, there is no art or science but has a genius peculiarly fitted for its attainment to any perfection; and every one therefore should apply himself (or his tutors or parents should point it out for him) to the study of that particular science which is most adapted to his capacity; by which means, as we have heretofore observed, those persons who would make a very mean figure in some studies, would greatly excel in others; and we frequently see a native genius forcing itself, as it were, out of the oppressive course of an education contrary to its natural bent, and that almost without a guide or director, into the particular study and business that is more suitable to its talents; of which a multitude of instances, among several sorts of artificers, mechanics, mathematicians and others, might

might be produced, as well among the antients as moderns, which fall ſo naturally into every man's reading and experience, that 'twere ſuperfluous to attempt to particularize them.

In order to aſſiſt our readers in the diſcovery of what ſtudies are fit for particular genius's, it is neceſſary to obſerve, that there ſeem to be ſome ſciences that naturally require a good *Memory*, and others that depend more on the *Underſtanding*: Thoſe moſt acquirable by means of the *Memory*, are grammar, latin, and all other languages; the theory of the law, poſitive divinity, coſmography, and arithmetic. Thoſe that belong to the *Underſtanding* are ſchool-divinity, the theory of phyſic, logic, natural and moral philoſophy, and the practice of the law, of which, for brevity ſake, we will give reaſons in three or four ſciences, which may equally ſerve for the reſt.

And, firſt, no conſidering man can deny, but the attainment of the latin and other languages depends principally on the memory; becauſe the tongues were only an invention of men, to be able to communicate together, and make known their meaning to one another, when the firſt inventors aſſembling together, framed words according to their fancy, as *Ariſtotle* obſerves, and jointly agreed about the ſignification of each. From whence came ſo great a number of words, and ſo many different modes of ſpeech, with ſo few rules, and as little reaſon, that without a good memory it would not be poſſible, either to comprehend, or retain them by any other faculty. How improper the imagination and the underſtanding are, to learn the languages, and the different modes of ſpeech, infancy plainly proves; in which, though it be an age wherein the child is leaſt provided with theſe two faculties, nevertheleſs, as *Ariſtotle* obſerves, he learns any language whatever better than grown perſons, though theſe be much more rational. If then it be true, that in the age wherein the memory flouriſhes, and the underſtanding and imagination are low, the tongues are ſooner learned than when the memory is in the decline, and the underſtanding in its full vigor,

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it is certain they are acquired by means of the memory, and not at all by any other faculty.

ARISTOTLE ſaid, that the tongues were not to be learn'd by reaſon, as not depending upon diſcourſe, and that therefore it was neceſſary to hear from another the words, and their meaning, and to bear them in mind. In purſuance of which, he proves, That if a man be born deaf, he would infallibly be dumb, becauſe he can't hear from another the ſound of the words, nor the meaning given them by their firſt inventors. That the tongues are no other than an effect of the humour and caprice of men, may be clearly inferred from this, that the ſciences may be equally taught in all languages, and that in each, may be ſpoken and made known, what any one of them would ſay. The *Romans* (as being lords of the world) finding it was expedient to have a common language, by means of which all nations might communicate together, and themſelves be enabled to underſtand ſuch as came to ſue for juſtice of them, and to treat of matters relating to the public affairs of every province, appointed ſchools to be erected in all parts of their wide empire, for teaching the *latin* tongue, which by theſe means has flouriſhed as the univerſal tongue even to this day.

As for ſchool divinity, it is certain that it refers to the underſtanding, becauſe the operations of this faculty are to diſtinguiſh, to infer, to reaſon, to judge, and to chuſe, and that nothing is done in this ſcience, but to raiſe doubts from inconveniencies, to anſwer with diſtinction, to infer againſt the anſwer what may be collected from good conſequences, and ſo to reply again, till the underſtanding be at eaſe, and reſt ſatisfied. But the beſt proof that can be made of this ſubject is to let you underſtand how ſeldom the *latin* tongue, and ſchool divinity, meet in one perſon, and how it rarely happens that a man be at the ſame time a good latiniſt, and profound ſchool-divine. At which effect ſome more curious being ſurprized, in taking notice of it, have ſearched whence it might proceed, and have been of opinion, that ſchool-divinity being

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writ in a harſh and barbarous language, and the ears of good latiniſts being inured to the pure and elegant ſtile of *Cicero*, they could not take pleaſure in that ſcience. It would be well for theſe gentlemen, that underſtand *latin* ſo well, that this were the true cauſe, for then by conſtraint, and otherwiſe accuſtoming their ears, they might at length find out a remedy for this inconvenience; but to be plain with them, the defect is not ſo much in their ears, as in their capacities.

THEY that are good latiniſts, have moſt aſſuredly an excellent memory, for without that they could never prove ſo expert in a language which is none of their own; and becauſe a great and happy memory is, as it were, contrary to a great and elevated underſtanding in the ſame ſubject, one debaſes and depreſſes the other. From whence it comes, that he who has not ſo exquiſite and lofty an underſtanding (the faculty to which belongs to diſtinguiſh, to conclude, to diſcourſe, to judge, and to chuſe) gains no great ground, nor makes any conſiderable progreſs in ſchool divinity. Whoever is not ſatisfied with this reaſon, let him read St. *Thomas*, *Scotus*, *Durandus* and *Cajetan*, who are the leading men in that faculty and profeſſion, and he will find great ſubtilties in their works, but writ, and delivered, in very coarſe church *latin*. For which there appears no other reaſon, but that theſe great authors having in their youth very mean memories, proved not more excellent in the *latin* tongue, but applying themſelves to logic, metaphyſics, and ſchool-divinity, they mounted up to the higheſt degree of the ſciences we admire, becauſe they were endued with a great underſtanding. At leaſt I can teſtify this of an eminent ſchool-divine who was a miracle in that ſcience, and yet not only could not reach the elegancies, nor the round periods of *Cicero*, but when he read in the chair, his ſcholars took notice that his *latin* was very baſe and mean, inſomuch that they being unacquainted with our doctrine, adviſed him that he ſhould ſecretly borrow a few hours from the ſtudy of ſchool-divinity, and employ them in reading *Cicero*. And taking this as the advice of good friends, he not only endeavoured in private, but publickly to remedy it;

it; and entered the form among the reſt to improve his *latin*: but what was very remarkable, that during the long time he did thus, he not only learn'd not any thing new, but had almoſt forgot all the *latin*, ſuch as it was, that he had learned before, ſo that in the end he was driven to read his lectures in his mother-tongue. Pope *Paul* the fourth, enquiring what divines were the leading men at the council of *Trent*, was told particularly of a certain *Spaniſh* divine, whoſe reſolutions, arguments, diſtinctions and anſwers, were truly worthy of admiration. The pope being curious to ſee and know ſo ſingular a man, diſpatched his orders to him to come to *Rome*, to give him an account of all the proceedings in the council. Being arrived, he did him a great many honours, and taking him by the hand, led him out to walk to the caſtle of St. *Angelo*, and entertaining him in very elegant *latin*, about certain works he intended to make, in fortifying it better, asked his opinion of each of his deſigns. To which he anſwered with ſo much pain, (not being able to ſpeak good *latin*) that the then *Spaniſh* ambaſſador, *Don Luys de Requeſens*, great governor of *Caſtile*, took up the diſcourſe for him to relieve him, and to divert the pope to ſome other matter. In a word, his holineſs (who by the way, gave little proof of his infallibility in this point) ſaid to one of his confidents, That it was utterly impoſſible for a man that underſtood *latin* ſo meanly, to be ſo excellent in divinity as was reported; whereas, had he tried him, inſtead of language (which is a work of the memory) and in fortifications and buildings (which belong to a good invention) in ſubjects depending on the underſtanding, he might have heard divine things from him.

IN the liſt of ſciences which refer to the imagination, we have particularly placed *Poetry*, and this not without good conſideration, but to let them know, how far they generally are from having the beſt underſtanding, who have a good vein in verſifying. Accordingly we ſhall find, that the ſame difficulty the *latin* tongue has in uniting with ſchool-divinity, the ſame, or greater, beyond compariſon, is obſerved betwixt that ſcience and the art of verſifying; this

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art being ſo contrary to the underſtanding, that for the ſame reaſon, he that would ſet up for a prime poet, muſt take leave of all the ſciences relating to that faculty.

THIS obſervation of our author's ſeems beyond all queſtion, made out ſince his time, in the famous *Engliſh* poet, *Pope*, who is the admiration of the age in which he lives, for the charming beauties of his verſification, and for diſplaying in his poetry all the graces of a fine imagination; but who, in the barbarous attempts he has made upon all his cotemporaries, and an obſcenity, and filthineſs, and virulence almoſt peculiar to himſelf, has ſhewn the coarſeſt and moſt deprav'd underſtanding that ever was blended with thoſe fine qualities in which, as we have obſerved, he excels.

ARISTOTLE, though he gives not the reaſon of this, yet notes, as I obſerved before, that *Marcus* the *Syracuſian*, was a better poet after he had loſt his underſtanding than before; and that, *vice verſa*, when he recovered his underſtanding, he loſt the excellence of the faculty of verſification: To what can this be owing but to the difference of heat in the temperament? for that great degree of heat which is neceſſary to inflame the imagination in poetry, is too exceſſive and ardent for the underſtanding, and accordingly deſtroys it.

CICERO is an illuſtrious inſtance of the truth of this obſervation, who having a fine underſtanding, and moſt capacious ſoul for the nobleſt attainments, yet was the moſt miſerable of all poetaſters, when he aim'd at making of verſes, having not heat enough to inflame his imagination into that divine enthuſiaſm, which is neceſſary to animate the faculties of a great poet: This makes *Juvenal*, when he finds *Tully* attempting to celebrate the glories of his own conſulſhip in verſe, and complimenting himſelf with having given to his country a ſort of ſecond birth, after his glorious efforts againſt *Cataline*; among others this being one;

O *fortunatam natam me conſule Romam!*

I ſay, this makes *Juvenal*, who could not apprehend, that the art of poetry was contrary to ſuch a wit as *Cicero's*,

Cicero's, severely lash him in his satires, saying, Had you rehearsed your *Philippics* against *Marc Antony* in such delicate verse, it had never cost you your life.

AND from what has been said, may result the reason of what has been often observed, that the best and most judicious critics very seldom make any great figure in poetry themselves; for that sedateness and coolness which true judgment requires, is, as has been said, very incompatible with that heat and fire which is requisite to enliven and warm the imagination. Of our own nation, Mr. *Rymer* might be named to exemplify this observation, and others would add Mr. *Dennis*, though some of his works are not without their poetical merit.

THE divine *Socrates* is another instance of the truth of our observation, who, after he had learned the art of poetry, yet with all his rules and precepts, could never so much as make a verse; and yet his understanding was so great, that he was pronounced by the oracle of *Apollo*, the wisest man in the world.

WHEN therefore we observe, that a young man has a good vein in making verses, and upon the first essay, hits upon abundance of rhimes, we may generally conclude that he runs a great risque never to attain, in any eminent degree, the *latin* tongue, logic, philosophy, physic, school-divinity, or the other arts and sciences relating to the understanding and memory: And it is further observable, and which still more corroborates this observation, that the fine vein of low humour that runs through the performances of our present facetious dean of St. *Patrick*'s, seems utterly to unqualify him for the severer studies; and a body of divinity, or collection of sermons of this uncommon genius would meet with a very surprizing reception in the world, were either to be offered by way of subscription. Such spirits as these amuse themselves in their youth with the romances of *Cleopatra*, *Cassandra*, *Don Bellianis*, *Amadis* of *Gaul*, &c. because they are works of imagination, and in their riper years are able to produce out of their own funds, the monstrous and incoherent figments of *Laputa*, and the *Houynhnms*, and even from the history of *Tom Thumb* create a *Lillipu-*

Lilliputian nation, and by way of oppoſition as eaſily ſtrike out of their fly-blown imagination a gigantic *Broḃdingnaggian*; or do any other thing, in which much fancy, and little judgment, is required.

We might further ſtrengthen our argument by the examples of the organiſts, choriſters, and muſic-maſters, of almoſt all ſpecies and denominations, whoſe wit is improper for *latin*, and all other ſciences pertaining to the underſtanding and memory. But by theſe three examples already produced of the *latin tongue*, of *ſchool-divinity*, and of *poetry*, we have ſaid enough to demonſtrate the truth of our doctrine. However, it may not be amiſs to make two or three other remarks on this head, which will be the more acceptable, becauſe ſome inſtances of the truth of them muſt fall under every one's obſervation.

And firſt we may aſſert, that fair writing is a work of the imagination, and we ſee few men of great underſtanding that write a fair hand. Amongſt others, I knew a moſt learned divine, who being aſhamed to ſee his ill hand, ventured not to write to any body, nor anſwer thoſe that writ to him, inſomuch that he reſolved to cauſe a maſter to come privately to his houſe, to teach him to write tolerably. And having laboured ſeveral days at it, and loſt his time, he gave it over, leaving the maſter ſurprized to ſee a perſon ſo very able in his profeſſion, ſo incapable of writing. And we might ſubjoin the inſtance of a renowned *Engliſh* ſenator, now living, [*A.*1730.] whoſe conceptions are great and noble, whoſe ſenſe is maſculine and ſolid, and capacity for public affairs, the moſt diſtinguiſhed; who has written admirably well, and diſcourſes on all occaſions fluently and with elegance; and who yet, with the utmoſt application, has never been able to write a tolerably legible hand, and is oblig'd in his moſt private and arduous affairs to have an amanuenſis, to whom he is nevertheleſs able to dictate with diſtinguiſhing excellence: This gentleman, like the divine, had a maſter to learn him to write, and even made, by inceſſant application, ſome little progreſs towards the attainment of a legible hand; but he could not hold

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it, and returned ſoon into his uſual barbarous *Arabic* characters, and can only write his name to be read diſtinctly, except by thoſe intimately converſant with his hand. And would any man obſerve, and take the pains to reflect on the poor ſcholars, that get their livelihood in the univerſities by copying in fine characters, they will find they underſtand but very little grammar, as little logic, and no more philoſophy; and if they ſtudy phyſic, or divinity, they never ſound the depth of any difficulty. And therefore the boy that can draw with his pen a neat-limb'd horſe, or a well-ſhaped man, and make fine flouriſhes, and bold ſtrokes, ſhould not be ſet to the ſtudy of any ſcience, but rather to a good painter, whereby his natural ability may be improved, and he may be excellent in that art, when he might never excel in any other.

TO read with a good grace, diſcovers alſo a certain kind of imagination, and if a youth takes to read well, and to any great degree of excellence, he ſhould not loſe his time in learning, but only think of getting his livelihood by reading of lectures and proceſſes. Now here is a thing worthy of conſideration, which is, that the difference of imagination which makes men agreeable in converſation, and good at raillery and repartee, is contrary to that which is neceſſary to a man to read gracefully; ſo that very few of the former can read volubly, but with heſitation, and miſtaking one word for another.

THE game of *Cheſs* is one of the things that beſt diſcover the imagination. And therefore he who has the ſubtle gambets in that play, for ten or twelve moves all together, is like to make a poor figure in the ſciences which depend on the underſtanding and memory; if he does not unite two or three faculties together, as we have already obſerved. And if a certain very learned divine, of my acquaintance, had underſtood ſo much, he would have been ſatisfied in a thing that gave him great trouble. This gentleman playing often with his domeſtics at *Cheſs*, and being beat as often, ſaid (in heat of paſſion) what is the meaning of this! Thou that underſtandeſt neither latin, logic, nor divinity, (though thou

thou haſt ſtudied them) yet thou win of me! Is it poſſible thou ſhouldſt have a better wit than I? The whole myſtery of this was, that the maſter was a man of great underſtanding, by which means he attained all the ſubtilties of ſchool-divinity; but wanted the difference of imagination, which is neceſſary to chefs-play; and his play-fellow had a bad underſtanding and memory, but a very ſubtil imagination.

THE ſtudents who keep their books in good order on the ſhelves, their chambers neat and clean, every thing in its proper place, and upon its own pin, have a certain difference of imagination very contrary to the underſtanding and memory. Spruce and beauiſh ſparks, who won't ſuffer the leaſt hair or wrinkle on their cloaths, have that ſame ſort of wit, which proceeds without doubt from the imagination.

THOSE who converſe agreeably, who are witty in expreſſion, and know how to droll well, have a certain difference of imagination very contrary to the underſtanding and memory. Therefore they are ſeldom good grammarians, logicians, ſchool-divines, phyſicians, or lawyers. If they are practiſed in buſineſs, and in the intrigues of the world, dextrous in accompliſhing whatever they undertake, ready at every turn to ſpeak, and to anſwer to the point; they are fit for the courts, and to be ſollicitors and attornies in cauſes, for merchants and factors, to buy and ſell; but not for learning. Herein the vulgar are deceived, who obſerving ſome men of indifferent education, attain to wealth and diſtinction in purſuit of ſuch occupations and employments, on which addreſs and ſollicitation depend, preſently imagin they would have proved ſingular men, had they been brought up to learning; when in truth, there are no genius's more repugnant, and more contrary to it, generally, than theirs.

CHILDREN that arrive late at the uſe of ſpeech, have in their tongue and brain too much moiſture: as this wears off in tract of time, they become very fluent, and great talkers, becauſe of the great memory they acquire, as their moiſture is abated. Which, as we formerly noted, once happened to that cele-

celebrated orator *Demoſthenes*, at whom (as we have ſaid) *Cicero* was ſurprized, being of ſo rude a ſpeech in his youth, and when a grown man, ſo very eloquent.

YOUNG men alſo, who have a good voice, and have by exerciſe dilated the paſſages of their throat, are very unfit for all the ſciences, becauſe they are cold and moiſt, which two qualities united together (as we have already affirmed) deſtroy the rational part. The ſcholars who punctually learn, and repeat the leſſon word for word, as they have it from the maſter, promiſe a good memory, but at the expence of their underſtanding.

CHAP. XI.

That eloquence and politeneſs of ſpeech are ſeldom to be found in men of great underſtanding.

ONE of the graces that inclines the vulgar to think a man very wiſe and prudent, is to hear him ſpeak with great eloquence, to obſerve his diſcourſe adorned and embelliſhed with choice of ſelect and ſignificant words, to bring many pertinent inſtances of the ſubject in queſtion; though in effect this happens not but where there is an union of the memory and imagination in a degree and medium of heat, that cannot reſolve the moiſture of the brain, but ſerves only to raiſe the figures, and makes them boil or ferment, by means of which many things are repreſented to the mind to be ſaid. It is impoſſible that the underſtanding ſhould be found in this union, becauſe, as we have already ſaid and proved, that faculty abhors the heat extreamly, and can no more conſiſt with moiſture. Which doctrine, had the *Athenians* known,

they

they would not have been ſo much ſurprized to ſee ſo wiſe and knowing a man as *Socrates*, want the gift of utterance, inſomuch as they who were ignorant of his worth, ſaid, That his ſpeeches and expreſſions reſembled a cheſt, plain and unpoliſhed without, but when opened, had within it exquiſite carving, and admirable figures. In the ſame error were they, who pretending to give a reaſon of the obſcurity and bad ſtile of *Ariſtotle*, ſaid, That induſtriouſly, and to gain to his works the greater authority, he affected that jargon, with ſo few figures, and ornaments of ſpeech. And if we conſider alſo the difficulties of *Plato*, and his conciſe ſentences, the obſcurity of his reaſons, and the ill connexion of his diſcourſes, we ſhall find, that it was owing to the reaſon we have aſſigned: But what ſhall we ſay to *Hippocrates*'s works, how he left out the nouns and verbs, the ill diſpoſition of his ſayings and ſentences, the ill connexion of his reaſons, and, in a word, how few things preſented to his mind to clear up, and lay the foundation of his doctrine? The great *Virgil* is ſaid to have been ſo ſlow of ſpeech, that he paſſed under great diſadvantages as to his converſation, and was thought to be little better than a blockhead, by thoſe who were not acquainted with his divine perfections in the poetical capacity. And who would dare to confirm this doctrine by ſuch an inſtance as St. *Paul*, and affirm, that he was a man of vaſt underſtanding and bad memory, (but ſuch a one with all his natural abilities as could not ſpeak with any ornament and politeneſs) had he not owned it himſelf, in theſe words; *I ſuppoſe I was not a whit behind the very chiefeſt apoſtles; but though I be rude in ſpeech, yet not in knowledge*, 2 Cor. xi. Which difference of wit was ſo accommodated to the preaching of the goſpel, that it was ſcarce poſſible to chuſe a better, becauſe there was no need on that occaſion of much eloquence, or great ornaments of ſpeech, ſince the skill of the orators of thoſe times lay moſt in impoſing upon their auditors falſities for truths, to perſuade the people by the force and ſubtilty of rhetoric, that what they received for good and profitable, was quite contrary; as, to maintain, that it was better to be poor than rich, ſick than well,

well, ignorant than knowing, and a thouſand other ſuch things, which were manifeſtly oppoſite to the received opinion. For which reaſon they were called by the *Jews*, *Gevanin*, as much as to ſay, ſophiſters.

SAY then, that God had made choice of an eloquent preacher, poſſeſſed of all the ornaments of ſpeech, who ſhould go to *Athens* or *Rome*, and teach, that at *Jeruſalem* the *Jews* had crucified a man, who was the true *God*, and that he died of his own good will and pleaſure to redeem ſinners, and that he roſe again the third day, and aſcended into heaven, where he now is; what would the auditory think, but that this propoſition was in the number of thoſe vain and fooliſh ones uſed by the orators to perſuade by the power of their art? For thus much St. *Paul* ſays, *Chriſt ſent me not to baptize, but to preach the goſpel; not with wiſdom of words, leſt the croſs of Chriſt ſhould be made of none effect*, 1 Cor. i. St. *Paul*'s wit was very proper for this miniſtry, becauſe he had a capacious underſtanding, to defend and prove in the ſynagogues, and amongſt the gentiles, that *Jeſus Chriſt* was the *Meſſiah* promiſed in the law, and that no other was to be expected; but with this, he had but an indifferent memory, ſo that he could not embelliſh his diſcourſe with perſuaſive and moving ſpeeches; and this was the difference of wit the preaching of the goſpel required. Nevertheleſs I ſhall not go about to infer from hence, that St. *Paul* had not the gift of tongues, for it is certain, that he ſpoke them all as readily as his own. Neither ſhall I maintain, that to defend the name of *Jeſus Chriſt*, the ſtrength of his underſtanding was ſufficient of itſelf, without the gifts and particular aſſiſtance that God gave him for that purpoſe. All that I pretend, is, to affirm that ſupernatural gifts are much more efficacious when they meet with a ſuitable diſpoſition, than when they fall upon a ſot and a blockhead. To this alludes the doctrine of St. *Jerome* in his proem upon *Iſaiah* and *Jeremiah*, demanding what is the reaſon, that, though it was the ſame holy ſpirit which ſpoke in both their mouths, *Iſaiah* delivered what he writ with ſo much elegance, and *Jeremiah* hardly knew how to ſpeak?

ſpeak? He anſwered, that the holy ſpirit accommodates itſelf to the natural manner of proceeding of each prophet, unleſs grace changes their nature, or teaches them a new language to deliver their prophecies in. You muſt know then, that *Iſaiah* was a nobleman, bred at court, and in the city of *Jeruſalem*, for which reaſon his diſcourſe was more elegant and polite; but *Jeremiah* was born and brought up in a village near *Jeruſalem*, called *Anathoth*, ſo that in his ſtile he was coarſe and rude as a peaſant, and ſuch a ſtile the Holy Ghoſt made uſe of in the propheſy he inſpired him with. The ſame may be ſaid of St *Paul's* epiſtles, that the truth of the holy ſpirit preſided in him when he writ them, to the end that he might not err, but that the language and manner of ſpeech was no other than the language and manner of ſpeech natural to St. *Paul*, accommodated to the doctrine he taught; becauſe the truth of ſchool-divinity abhors a multiplicity of words.

The knowledge of tongues, and the ornaments and politeneſs of ſpeech accord admirably with poſitive divinity, becauſe that faculty belongs to the memory, and is no other than a maſs of orthodox ſayings, and ſentences, cull'd out of the holy fathers, and from ſacred writ, and treaſured up in that faculty, in the ſame manner as a grammarian ſelects the fine flowers of *Virgil*, *Horace*, *Terence*, and other *latin* poets he reads, and, as occaſion preſents, pertinently cites ſome paſſages from *Cicero* or *Quintillian*, to make ſhew of his reading to his auditors.

They that are furniſhed with this union of imagination and memory, and diligently collect whatever has been ſaid and writ, that is conſiderable in the ſcience they profeſs, and quote them at due time and place, with the ornaments of good language, as having already found in all the ſciences ſo many things; appear very profound in the opinion of thoſe who are ignorant of our doctrine, though in effect they are but ſuperficial, and will diſcover their defect as ſoon as they are ſifted to the bottom, of what they deliver with ſo much aſſurance. And the reaſon is, that the

understanding, to which appertains the knowledge of the truth of things from their root, is not agreeable with the abundance of fine speeches. 'Tis of these the holy scripture speaks, *The talk of the lips tendeth to penury*, Prov. xiv.

SUCH as have these two faculties, the imagination and memory joined together, boldly attempt the interpretation of holy scripture, conceiting, because they understand a great deal of *hebrew*, *greek*, and *latin*, that it is easy for them to give the true sense of the letter: But after all, they are out; first, because the words of holy scripture, and its manner of speaking, have many other significations than ever even *Cicero* knew in his tongue; and secondly, because such people want understanding, which is the faculty that discerns whether the sense be orthodox or not.

CHAP. XII.

That the theory of divinity belongs to the understanding, and preaching (which is the practic) to the imagination; and of the requisites of a good orator.

'TIS a point much controverted, not only amongst the wise and learned, but even such as has not escaped the very vulgar, who daily ask the reason whence it comes that a divine who is a great school man, sharp in dispute, ready in his answers, reads and writes with admirable learning, nevertheless when he gets once into the pulpit, frequently knows not how to preach; and on the other hand, when a man is an excellent preacher, eloquent, acceptable, drawing all the people after him, it is a great miracle if he know much of school-divinity.

No man till now has been able to give any other anſwer than to attribute all this to God, and to the diſtribution of his gifts; and I own it is very well done, when they know not the particular cauſe. We have in a manner ſolved this doubt in the preceding chapter, where we have aſſerted, that the theory of ſchool-divinity pertained to the underſtanding; whereas preaching (which is the practic) is a work of the imagination. And accordingly as it is difficult to join in the ſame brain a good underſtanding with a great imagination, ſo it cannot well be, that a man ſhould at the ſame time be a great ſchool-divine and a famous preacher. And 'tis certain, that almoſt all the graces, by means of which good preachers draw the people after them, and hold them charm'd and raviſh'd, are but a work of an excellent imagination, and in part of a happy memory; for, to ſay nothing of the rules of the arts of logic and rhetoric, which are beſt attained by perſons of a lively imagination and good memory, and beſides, the particular benefit ſuch divines pretend from their doctrine, their principal ſtudy is to ſeek out a fine text, to which they may pertinently apply many thoughts, and fine paſſages drawn out of ſacred writ, holy fathers, poets, hiſtorians, phyſicians, and lawyers, skimming lightly, as it were, over the ſurface of every ſcience, and aiming at eloquence and the fine turning of a period, to pleaſe the ears of their auditory, rather than to enter into the underſtandings; by which means, with the help of a good memory and a lively imagination, they attract their hearers, and gain the reputation of good orators; for almoſt all mankind are of the ſame ſpecies, and are much ſooner taken by ſound than ſenſe: while the profound genius who plods on to the reaſon of things, and penetrates to the very bottom and foundation of the ſciences, deſpiſing the ſound, and adhering to the ſenſe only, has his arguments lie too deep, and his good ſenſe too cloſe for common capacities to fathom, and however he may be eſteemed among the few of ſolid underſtandings, yet he muſt be obliged to pen and ink, to make his excellent endowments known; and in this caſe indeed he builds

for posterity, and his name flourishes, when that of the superficialist, who in the pulpit carried all before him, is no more remembered.

BUT however, since the powers of the imagination and understanding are thus opposite to, and incompatible with one another, and since the genius's that are able to make a figure by means of the former, are much more numerous than the others, let us briefly lay down by what means this far greater part of mankind may succeed in attaining the requisites of a good orator; which will be so many demonstrations of the truth of our doctrine, that the practic part of preaching is a work of the imagination rather than of the understanding.

WE have said, that whatever is spoke in good figures close to the purpose, and on a sudden, all pleasant jests, allusions, and comparisons, are the gifts of the imagination: Wherefore the first thing a perfect orator should do when he takes his theme in hand, is to look out some *Argument*, some apposite sentences and passages which he may amplify, and prove from his stock of reading, and to make choice of no words but such as are well-sounding to the ears, which choice belongs principally to the imagination.

THE second good quality, is to have an exuberant *Invention*, and a large stock of reading; in order to amplify, and prove his subject by proper citations, in which case a quick imagination is like a setting-dog that hunts and brings the game to hand. For this reason we have said before, that heat is the instrument with which the imagination acts; inasmuch as this quality raises the figures in making them boil or ferment, as it were; so that we discover by this means all we aim at, and if there be nothing more to consider, the imagination has power not only to compose figures of things possible; but also to join sometimes such as are next to impossible, in order to diversify and embellish the subject.

IN lieu of invention, orators may help themselves with much reading and a good memory, where the imagination fails; but after all, book-learning is bounded

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and limitted, and the proper invention runs free like a good fountain, whence daily flow freſh ſtreams of living water, that overflow and impregnate the adjacent plains.

The third property a good orator ought to have, is *Order*, to know how to diſpoſe what he has invented, and to reduce every thing to its proper place; in ſuch ſort as one thing may bring in another, and the whole correſpond in a juſt proportion of all the parts, to the end that there may ariſe a true figure: Which grace (when it is not natural) is wont to give a great deal of trouble to preachers, who find in books many things to ſay, but have not the skill to reduce them to their proper place. It is certain, that this property of ordering and diſtributing, is a work of the imagination, becauſe it has the name of figure and correſpondence.

The fourth property good orators ought to have, and the moſt important of them all, is *Action*; by which they give, as it were, a life to what they ſay, moving the auditors, and engaging them to believe that to be true, which they endeavour to perſuade. And of ſo great concern is this gift to preachers, that a ſermon of common matters, and of ſmall moment, without either invention or diſpoſition, ſhall fill the people with admiration, if animated with action; which may be called in another word, the ſpirit and life of elocution.

There is in this, one thing highly remarkable, which ſhews how much this gift can do, which is, that the ſermons that appear extreamly well, as they are ſet off with all the advantages of action and livelineſs of the orator, flag exceedingly when they are committed to writing, or come once to be read: the reaſon of which is, that it is impoſſible to repreſent with the pen, the action and geſtures which give it all the advantages in the pulpit. There are other ſermons go off better in reading, and will not bear preaching without book, becauſe ſome paſſages therein ſeem to be, as it were, narrative only, and require not action. Which occaſioned *Plato* to ſay, that the ſtyle to be obſerved in ſpeaking is very different from that in writing well; and for this

reaſon we ſee abundance of men, who talk very well, write ill; and others, on the contrary, write very well, and talk ill. All which is to be referred to action, which without doubt is a work of the imagination, ſince all that we have ſaid of it carries with it figure, correſpondence, and good conſonance.

THE fifth property an orator ought to have, is to know how to *apply well*, and bring proper inſtances, and good alluſions, which takes with the auditory more than any thing elſe; for what is taught by a good example is eaſily underſtood, and without that the arrow flies over their heads. Accordingly *Ariſtotle* demands, *Why thoſe that hear orators take more pleaſure in examples and fables brought to prove what they would perſuade, than in the arguments and reaſons they produce?* To which he anſwers, that by examples and fables men learn beſt, becauſe it is a proof that regards the ſenſe: but it is not ſo with arguments and reaſons; for to be capable of them requires a large underſtanding. Therefore *Jeſus Chriſt* our Redeemer made uſe of ſo many parables and comparitions in his diſcourſes, becauſe by their means he made many divine ſecrets better underſtood. But this is certain, the invention of parables and alluſions is the work of the imagination, becauſe, as we have already often ſaid, the ſame carries figure, good correſpondence and ſimilitude.

THE ſixth property of a good orator is, that his *language* be elegant and unaffected; that he uſe refined terms, and many quaint and free expreſſions, which graces we have heretofore proved in part to pertain to the imagination, and in part to a good memory.

THE ſeventh is contained in theſe words of *Cicero*, *That he ought to be furniſhed with a good* Voice, *a free action, and a natural gracefulneſs*; a voice clear and well-ſounding, tuneable to the auditory, not harſh, hoarſe, or too ſqueaking. And though it be true, that this proceeds from the temperament of the breaſt and throat, and not from the imagination; yet ſure it is, that from the ſame temperament from which is derived a good imagination (which is heat) comes alſo a good voice. Which falls out altogether to our purpoſe,

poſe, for the ſchool-divine being of a cold and dry temperament, cannot have the organ of the voice good; which is a great advantage in the pulpit: So that when we hear any good voice, we may immediately affirm it ſprings from the great heat and moiſture of the breaſt, which two qualities when they mount up to the brain, deſtroy the underſtanding, but improve the memory and imagination, which are the two powers made uſe of by good preachers to take with their auditory.

The eighth property of a good orator, as *Cicero* ſaid, is to have a ready and fluent *Tongue*, which is a gift that cannot light on men of great underſtanding; for to be ſo ready, there is required much heat and a moderate dryneſs, which is not to be found among the melancholic, whether naturally or by aduſtion. *Ariſtotle* proves it in asking this queſtion, *Why thoſe who have an impediment in their ſpeech are held all to be of a melancholy complexion?* Which proceeds from this, that the melancholic have always abundance of froth and ſpittle in their mouths, through which diſpoſition they have a very cold and moiſt tongue, which are two qualities that render it heavy, and as it were paralytic, ſo that it cannot follow the imagination faſt enough.

The choleric unmoved ſpeak well and readily, becauſe they then have the degree of heat requiſite to the tongue, and to a good imagination; but being put into a paſſion, the heat riſes a degree higher than it ought, and perturbs the imagination. The flegmatic being unprovoked, have a very cold and moiſt brain; whence nothing offers to their ſpeech, and their tongue is relaxed with too much moiſture; but when they are vex'd, and their gall is once ſtirred, the heat gets a degree, and quickens their imagination, which occaſions much to offer to be ſaid, and their tongue is freed from impediment when once it is heated. Such have no good talent in verſifying, for they are cold of brain; but when they are heated, they make better verſes, and with more eaſe, againſt thoſe that nettle them: To which purpoſe *Juvenal* ſaid,

Si natura negat facit indignatio versum.

What nature denies, wrath oft supplies.

THRO' this defect of tongue, men of great understanding, cannot be good orators, nor good preachers, and particularly inasmuch as the action requires they should speak sometimes high, and sometimes low, and that such as are slow-tongued, cannot pronounce without bawling with open throat, which is one of the things that tire the auditors: Accordingly *Aristotle* inquires, *Why those of slow speech cannot speak low*, to which he answers very well, that the tongue, which is as it were glued to the palate by the great moisture, cannot disengage it self but by a forceable effort, and not by gentle means.

THUS have I proved that the good natural qualities a perfect orator ought to have, arise from the imagination, for the most part, and some from the memory: and if it be true that the great preachers of our times please the people because they are furnished with the same qualities we have spoken of, it follows then, that he who proves an eminent preacher, knows very little of school-divinity, and he that is a good school-divine cannot preach, through the great contrariety that the understanding carries to the imagination.

IN fine, 'tis proved by common experience, that tho' the orator studies natural and moral philosophy, physic, metaphysics, the laws, the mathematics, astrology, and all the other arts and sciences, yet he knows no more of them than the flowers, and retains only the most received propositions, without fetching from the root the reason and cause of any of them; and so pierces no deeper in philosophy, which belongs to the understanding, than a superficial knowledge of the nature of things, which may serve to brighten and improve his imagination only.

BUT since we have allowed this difference of wit as improper for the function of a preacher, and that we are obliged to give and assign to each difference of wit, the

the ſcience that ſuits beſt in particular with it; it is convenient to aſſign what difference of wit he ought to have, to whom the office of preaching is truſted, which is of ſo great importance to a chriſtian ſtate. You are to conceive, that though we have already proved, that it implies a natural repugnance to aſſociate a great underſtanding with a large imagination and memory, yet is there no rule ſo general in any art but admits of ſome limits and exceptions. For, when nature is ſtrong with all her forces, and meets no obſtacle, ſhe makes ſo perfect a difference of wit, that ſhe ſometimes unites in one a great underſtanding with a great imagination and memory, as if thoſe powers were not contrary, or held any natural oppoſition.

The ſame is the moſt proper and convenient qualification for the employment of a preacher, if it could be found in many perſons, but they are ſo few, that not one of a thouſand wits can be found under this conſideration. And therefore we muſt look out another difference of wit more familiar tho' leſs perfect than the former. And this ſeems to be the melancholic, who by aduſtion unite a great underſtanding with a great imagination; but they generally are weak of memory, becauſe the ſame aduſtion dries and hardens the brain. Theſe make good preachers, at leaſt they are the beſt to be found, next thoſe perfect ones we have ſpoken of; for though they are weak of memory, their own invention is ſo large, that their very imagination ſerves them in lieu of memory and remembrance, ſupplying them with figures, and furniſhing them wherewith to ſpeak, without ſtanding in need of any thing.

Now that melancholy by aduſtion has this variety of temperament, of cold and dry, for the underſtanding, and of heat for the imagination, *Ariſtotle* declares in theſe terms, *That melancholy men are of temper various and unequal, becauſe the aduſt choler is a humor very various and unequal, it being equally capable of hot and cold in extreams by turns.*

The tokens by which this temperament may be diſcerned, are very evident; their complexion is dark,

their eyes red, the head dark brown, and often bald; flesh hard and hairy, great veins; they are good company, and affable, but lustful, proud, stately, crafty, double, injurious, and revengeful. This is to be understood when melancholy is kindled, for if it be cooled, forthwith arise in them the contrary virtues, chastity, humility, fear, and reverence of God, charity, mercy, and contrition. Now vice prevails in them, and then virtue; but with all these faults, they are the most ingenious, and most able for the service of preaching, and for all sorts of things wherein worldly wisdom is required; because they have a great understanding to find the truth, and a powerful imagination to persuade. In the third rank are men of great understanding, without imagination and memory; these preach not gracefully, but preach sound doctrine, and, as we have hinted, are better fitted to write than to preach, by which they will build to themselves a sort of immortality by their works.

CHAP XIII.

That the theory of the Laws pertains to the memory; pleading causes and judging them (which is the practic) to the understanding.

AS the lawyer is obliged to pay an implicit regard to the laws, which are to be his absolute rule and guide; 'tis easy to assign the species of wit most adapted for this study; which must necessarily depend on the memory, rather than the understanding; for if he is to have the principal regard to the number of the laws, as they are distinguished from one another by multitudes of exceptions, restrictions, enlargements

and

and explanations, 'tis more to his purpoſe to have by heart what is determined by the law in each caſe that occurs, than to diſcourſe or reaſon after what manner it ought to be determined; for one is neceſſary, and the other impertinent; no other opinion being ſufficient to carry the point but the deciſion of the law. So that it is certain, that the theory of the law belongs to the memory, and not to the underſtanding or imagination; for which reaſon the laws are ſo entirely poſitive, and the lawyers have their underſtandings ſo determined by the will of the legiſlature, that they cannot interpoſe their own opinion: But where they are in doubt what the law has declared, when their clients conſult them, they are allowed to ſay, I will look for the caſe in my books, which ſhould the phyſician ſay when they come for cure of any diſeaſe, or a divine in a caſe of conſcience, they would paſs for men of ſmall ability in their profeſſions. And the reaſon of it is, that theſe two laſt ſciences have their definitions and principles univerſal, under which particular caſes are contained; but in the faculty of the law, each law contains only one caſe, the following law not depending on it, though they are placed both under one and the ſame title. Wherefore it is neceſſary to have notice of all the laws, to ſtudy each in particular, and to lay them up all diſtinctly in the memory.

But this that we have now ſaid, is to be taken with a principal regard to the *theory* of the law; which will enable a man to be an excellent chamber-council, as we call them; but the *practic* part, which is to plead and reaſon at the bar, or on the bench, and to expound and reconcile the ſeeming different and jarring intentions and meanings of the laws, requires the powers of the imagination and underſtanding to be joined to thoſe of the memory, and a man thus formed is capable of making the greateſt figure in human life.

The lawyers who are furniſhed with ſuch a wit and ability, do not always tie themſelves down to the ſtricteſt terms of the law; they ſeem to be rather qualified for legiſlators, of whom the laws go themſelves a begging

what they will have them determine, and depend in ſome meaſure for their conſtruction, on the powers of their eloquence and judgment; eſpecially in thoſe caſes which are ſometimes ſubject to variation from the different circumſtances of time, place, perſon, means, matter, cauſe, and the thing it ſelf; all which conſiderations frequently diverſify the determination of the law. Whence it reſults, that for the knowledge of the theory of the law, a great memory, with an indifferent underſtanding, ſuffices; while the pleader and practical lawyer, can better diſpenſe with a bad memory than a good underſtanding; ſeeing that to ſupply the defect of memory, there are many remedies, ſuch as books, tables, alphabets, and ſeveral other inventions of men; but if the underſtanding be defective, there is no manner of remedy for that. As for cauſes and pleadings, each advocate gives his opinion the beſt grounded upon law he can; but after all, he cannot know certainly by any art if his underſtanding has compoſed ſuch a judgment as true juſtice requires; for if one lawyer proves in form of law, that the plaintiff is in the right, and the other denies it alſo by way of law; by what expedient ſhall it appear, which of the two reaſons better? The ſentence of the judge makes no demonſtration of true juſtice; nor can it be called ſucceſs, becauſe his ſentence amounts to no more than an opinion, and he does no other than fall in with one of the council. And to increaſe the number of learned men in the ſame opinion, is not an argument to believe that their ſentiment is the truth; for 'tis certain, that many weak capacities (though they join together to diſcover ſome dark and hidden truth) ſhall never arrive at the point or degree of ſtrength, as a ſingle one that is of a deeper reach.

AND that the ſentence of the judge makes no demonſtration of the truth, is clearly ſeen, in that it is frequently reverſed in a higher court, where they very often judge after another manner; and what is yet worſe, it may happen that the inferior judge may have a better underſtanding than he before whom the appeal lies, and his opinion may chance to be more conformable

formable to reaſon. That the ſentence of the ſuperior judge, is no more a ſufficient proof of juſtice, is a thing yet more manifeſt; for we ſee every day that in the ſame caſes (without adding or diminiſhing any thing) and from the ſame judges, quite contrary ſentences iſſue. And he who has already been once miſtaken, in confidence of his own reaſons, may very well be miſtaken again; ſo that his opinion is the leſs to be depended upon, becauſe, *He that is once in the wrong, is ever preſumed in the wrong*, ſays the wiſe man.

Pleaders obſerving the diverſity of opinions amongſt the judges, and how each is ſway'd by the reaſon that ſeems moſt to prevail with him, and that ſometimes they are concluded by one argument, and ſometimes by another quite contrary, thereupon they boldly undertake to defend any cauſe indifferently in the negative or affirmative; the rather, becauſe they ſee by experience, that on one ſide and the other, they may obtain ſentence in their favour. And ſo it comes to be verified, what wiſdom has ſaid, *That the thoughts of men are full of fear, and their foreſight uncertain.* The remedy then for this, ſince the reaſons of the law remain without proof and experience, is to make choice of men of great abilities to be judges and pleaders, inaſmuch as *Ariſtotle* ſays, the reaſons and arguments of ſuch are as firm and riveted as experience itſelf. But the beſt remedy, is, if poſſible, to avoid going to law at all, as well for its intolerable expence and tediouſneſs, as for its uncertainty, and the fallibility, if not prepoſſeſſion and partiality of the judges themſelves.

We have before obſerved, that if he who makes his courſe in philoſophy, does not begin in a month or two, to reaſon, and raiſe ſome objections, and if there come not to his mind arguments and anſwers upon the matter treated of, he has no underſtanding at all; but if he prove towardly in this ſcience, it is an infallible ſign, that he has the right underſtanding for the law, ſo that he may out of hand apply himſelf to it, without the leaſt ſcruple.

CHAP.

CHAP. XIV.

That the theory of Phyſic belongs part to the memory, and part to the underſtanding; and the practice, to the imagination.

THE perfection of a phyſician conſiſts in two things, which are abſolutely neceſſary to carry him on to the end of his art. The firſt is to know from a right method, the precepts and rules of curing man in common, without deſcending to particulars. The ſecond is, to be long exerciſed in the practice of phyſic, and to have viſited a great number of patients; for neither do men differ ſo far from one another, but that in many things they agree, nor are they on the other hand, ſo like, but that there are in them certain idioſyncracies, of ſuch a nature, that they cannot be told nor writ, nor taught, nor gathered, ſo as to be reduced to art; but to know them is only granted to him that hath often ſeen and had them in practice.

IT fares the ſame with the four elements, and the four firſt qualities, hot, cold, moiſt, and dry, from the harmony of which ſpring the life and health of man, and of ſo ſmall a number of parts, nature makes ſo many diſagreeing proportions, that if a hundred thouſand perſons were begot, each would have his ſtate of health ſo proper and peculiar, that if God miraculouſly ſhould on a ſudden change the proportion of theſe four firſt qualities, they would all remain ſick, except it may be two or three, who by great chance would have the ſame harmony of temperament. From whence two conſequences may be neceſſarily inferred; the firſt, that every man who ſhall fall ſick, is to be cured conformably to his particular proportion; ſo that if the phyſician reſtore him not to his firſt proportion

of

of humours and qualities, he ſhall never be well cured. The other is, to perform this as it ought, there is need that the phyſician ſhould have ſeen and dealt with the patient ſeveral times in his health, to the end that when he falls ſick, he may judge how far he is off from health, and to what point he is to reſtore him by his remedies; and this laſt reaſon is ſo obvious, that we need only mention it; tho' the importance of it is not ſufficiently attended to in the preſent practice of phyſic, in which the apothecary ſhall be permitted to recommend generally a ſtranger to the patient and his conſtitution; and the event of it too often fatally ſhews the folly of this inconſiderate error.

But as to the firſt point, which is to underſtand and know the theory and compoſition of the art, *Galen* ſays, it is neceſſary to have a great underſtanding, and good memory; becauſe phyſic partly conſiſts of reaſon, and partly of experience, and hiſtory; for the one, he muſt have underſtanding; and for the other, memory; and becauſe it is very difficult to join theſe two powers in a predominant degree, of neceſſity the practical phyſician muſt be defective in the theory; accordingly we ſee a great many phyſicians very learned in *greek* and *latin*, great anatomiſts, and botaniſts (which are works of the memory) that being put to argue, diſpute, and ſearch out the reaſon, and cauſe of each effect (all which belong to the underſtanding) make no figure at all. The contrary happeneth in others, who ſhew abundance of wit and capacity in the logic and philoſophy of this art; but if they be put to *latin* and *greek*, to plants and anatomy, never come off with credit; becauſe they are deſtitute of a good memory. For this reaſon *Galen* ſays, That it is no cauſe of wonder, that in ſo great a number of men that ſtudy phyſic, there are ſo few good phyſicians; and giving the reaſon of it, he ſays, That a wit requiſite to this ſcience is hardly to be found, neither a maſter that can teach it in perfection, nor a ſcholar that ſtudies it with ſufficient care and exactneſs.

Tho' what *Galen* has aſſerted in this caſe be true, yet he has not ſpecified wherein the difficulty lies, as we will do;

do; namely, becauſe it is ſo difficult to unite a great underſtanding with a good memory; and becauſe there is a repugnance between the underſtanding and imagination For that the imagination, and not underſtanding, is the power of which the phyſician makes uſe, in the knowledge of the cauſe and cure of particular diſeaſes, is very eaſy to prove, according to the doctrine of *Ariſtotle*; who ſays, that the underſtanding cannot know individuals, nor diſtinguiſh one from the other, nor diſcern the time and place, nor other particularities, which make men diſagree amongſt themſelves, and that each one is to be cured after a different manner; and the reaſon of it is, (according to what vulgar philoſophers deliver) that the underſtanding is a ſpiritual faculty, which cannot be affected by ſingulars, as being material. For this cauſe *Ariſtotle* ſaid, that the ſenſe is of particulars, and the underſtanding of univerſals. If then cures are of particular perſons, and not of univerſals (which are both ingenerable and incorruptible) the underſtanding will appear to be a power very impertinent in working of cures.

The difficulty lies in diſcerning why men of great underſtanding cannot have good outward ſenſes for particulars, theſe two powers being ſo contrary one to the other; and the reaſon is very clear, which is this, That the exterior ſenſes cannot act well, if not aſſiſted by a good imagination. Which we may prove from the opinion of *Ariſtotle*, who being to declare what the imagination is, ſays, it is an impreſſion ſtruck from the exterior ſenſe; in the ſame nature as colour (multiplying with the thing colour'd) affects the eye: For ſo it fares, that the ſame colour which is in the cryſtallin humour tinctures the imagination, and there impreſſes the ſame figure that was in the eye: And if you demand, of which of theſe two kinds the notice of particulars is made? all philoſophers anſwer, and very well, that it is the ſecond figure which affects the imagination, and by both the notice is made. But from the firſt, which is in the cryſtallin humour, and the viſive faculty, ſprings no notice, if the imagination be not intent. Which the phyſicians prove plainly, ſaying,

ing, that whenever the flesh of a sick man is lanced, or cauterized, and he apprehends no pain, it is a sign, that the imagination is engaged in some deep speculation: We see the same by experience in those that are sound; for if they are deep plunged in some speculation, they see nothing before them, nor hear, though they are call'd, nor taste meat, savoury or unsavoury, though in their mouths. Wherefore it is certain, that the imagination forms the judgment, and notice of particulars, and not the understanding, or outward senses. Then it follows well, that the physician, who is very expert in the theory, because he has a great understanding, or a good memory, of necessity will prove an ill practitioner, inasmuch as his imagination will be lame. As on the contrary, he that shall be a very able practitioner, undoubtedly will be but a mean theorist; for a great imagination cannot well be united with a good understanding and memory. And this is the reason why none are so consummate in physic, as never to fail in their cures; for not to fail in their performances, there is need to know the whole art, and to have a good imagination to reduce the same to practice; but these two things, as we have proved, are incompatible.

The physician never attempts the cause and cure of any disease, but that he secretly frames to himself a syllogism in *darii*, unless he be but an empiric: And the proof of the first position of his premises belongs to the understanding, and the second to the imagination. For which reason, the approved theorists, ordinarily err in the *minor*, and the expert practitioners in the *major*: as if we should speak in this manner; All fevers that depend on cold and moist humours are to be cured with medicines, hot and dry (in taking the indications from the cause): But the fever which affects this man, depends on cold and moist humours; Therefore it must be cured with medicines hot and dry. The truth of the *major* is proved by the understanding, because it is an universal proposition, that cold and moisture require heat and dryness to moderate them; for that every quality is abated by its contrary:

But

But when we come to the proof of the *minor*, the underſtanding avails not, becauſe it is particular, and ſo is out of its juriſdiction, and its cognizance pertains to the imagination, which draws from the five exterior ſenſes the proper and particular ſymptoms of the diſeaſe.

BUT if the indication be to be taken from the fever, or its cauſe, it is that which the underſtanding cannot reach, only it teaches to take the indication from that we apprehend moſt danger from: But which of the indications is greateſt, the imagination only can comprehend in weighing the evils the fever does, with thoſe that proceed from the ſymptoms or cauſe, the little forces, or great ſtrength. To learn this notice, the imagination has certain ineffable proprieties, by means of which it reaches ſome things, which it can neither tell nor comprehend, and for which no arts are of uſe. Inſomuch that we ſee a phyſician coming to viſit the ſick, who by the ſight, hearing, ſmell, and touch, arrives at the knowledge of what ſeemed impoſſible; ſo that ſhould we ask him by himſelf, how he was able to arrive at ſuch nice notions, he could not tell, becauſe it is a gift that proceeds from a fruitfulneſs of imagination, which may be otherwiſe called ſagacity, and which by ſome common ſigns, uncertain conjectures, and where there is but ſlender footing, in the twinkling of an eye, learns a thouſand different things, wherein the virtue of curing and prognoſticating with aſſurance conſiſts.

OF this ſort of ſagacity the men of great underſtanding are unprovided, becauſe it makes a part of the imagination: inſomuch, that having before their eyes the ſame ſigns that diſcover to others the ſecret of the diſeaſe; yet they make no impreſſion upon their ſenſes, becauſe theſe very men are unprovided of imagination.

BUT a great doubt ariſes in this doctrine, which is to know how the phyſicians furniſhed with a great imagination, learn the art of phyſic, ſince they are defective in underſtanding? For if it be true, that theſe cure the ſick better than the moſt learned phyſicians,

to

to what end do these lose time to study in the schools? to this the answer is, That it is a matter of great importance, first to know the art of physic, for in two or three years a man may learn all that the ancients were gathering in two thousand: and which if he were to acquire by his own experience, he ought to live at least three thousand years; and in experimenting medicines, he would kill an infinite number of people before he understood all their virtues, from which he is freed, by reading the books of rational and experimental physicians, who acquaint us in their writings what they have found out in the whole course of their lives, to the end, that the doctors that come after them may boldly make use of those that are safe, and forbear the poisonous. Besides which, we are to know, that the most common and vulgar things in all arts are the most obvious and easy to learn, and yet are the most important in the work; and, on the contrary, the most curious and subtil are the most obscure, and least necessary in practice. And so it is, that the men of great imagination are not so wholly destitute of understanding and memory, but that in the remiss degree in which they possess these two powers, they may be able to learn the most necessary points of physic, which, as we said, are the plainest; and with the good imagination they have, they may better know the disease and its cause, than the most rational in the science, since it is the imagination that finds occasion of the remedy they ought to apply; in which consists almost the whole practice. Therefore *Galen* said, that the true name of a physician was to be the *inventor of the occasion*; but to learn to know time, place, and occasion, without doubt, are works of the imagination, because that carries with it, figure and correspondence.

This is farther embellish'd by one observation, that may be made, and that of no small importance; namely, that in the critical minute, the good imagination of the physician frequently hits upon what is proper to be done: whereas if he takes more time and further consideration, there occurr to his mind a thousand inconve-

conveniencies, that hold him in ſuſpence ſo long, 'till the opportunity for applying the remedy is ſlipt.

'TIS therefore never adviſable to beſpeak a good practical phyſician, to conſider well what he is to do, but rather leave him, eſpecially in critical caſes, to the effect of his own imagination: For 'tis certain, that too nice ſpeculation raiſes the natural heat to a degree ſo great and intenſe, that it confounds the imagination. But however, the phyſician who has it remiſs, will not do ill to uſe more conſideration, becauſe the heat riſing to the brain may thereby come to reach the pitch which this power requires.

As a farther proof of what we have aſſerted, we often find, that in the ſame caſes, and even leſs dangerous, princes and great lords often fall under the phyſicians hands, when perſons of leſs conſideration do well; and this can only be, becauſe the conſequence of the one produces a fear, which is the effect of that cold which cauſes conſideration, while in the other, the phyſician's imagination being free and unapprehenſive, he naturally directs thoſe methods, which make for the benefit and recovery of his patient.

THIS we have a late demonſtration of in the perſon of *Joſeph* emperor of the *Romans*, the brother and predeceſſor of his preſent imperial majeſty *Charles* VI. who being taken ill of ſymptoms which were judged to prognoſticate the ſmall-pox, a conſult of phyſicians was held, who, by reaſon of the conſequence of the patient, being divided in their opinions, determined to ſtay 'till next day, to judge with more certainty of his diſtemper: the wiſe men tarry'd accordingly 'till next day, and then 'twas too late: the ſmall-pox, for want of being aſſiſted, ſtruck in; nor could they ever be driven out again; and that auguſt prince, on whoſe life a thouſand great events depended, died a martyr to the over-great conſideration of his phyſicians: And it had been happy for him and his family, if there had been but one phyſician in *Europe*, and even if the imagination of that one had been overcome by his underſtanding or conſideration, that a good experienced nurſe had been preferr'd to the whole faculty.

FROM

FROM all that has been ſaid, 'tis eaſy to obſerve, that a perſon of a lively imagination is the moſt likely to ſucceed in the ſtudy of the practical part of phyſic; while the knowledge of the theory ſeems to be confined principally to perſons of a good memory, aſſiſted by a ſound underſtanding. To which we may add, That the bold and ſucceſsful practice of the late eminent Dr. *Ratcliffe*, among us of the *Engliſh* nation, affords many inſtances of the truth of the doctrine above advanced, which are too well known to need enumerating.

CHAP. XV.

To what difference of wit the Military Art belongs, and by what marks the man may be known, who has it.

'TIS certain, that prudence is a far more eſtimable quality in a general, and ought rather to be rewarded, than courage or bravery; for, as *Vegetius* ſaid, there are few over-couragious captains, that luckily accompliſh great actions; and the reaſon is, that prudence is more neceſſary in war than boldneſs in encountring. But what this prudence is, which is neceſſary, *Vegetius* could never find out, nor ſpecify the difference of wit he ought to have, who commands in chief; and no marvel, becauſe the manner of philoſophizing on which this knowledge depends, was not then found out. True it is, that inquiry falls not within our firſt intention, which was to make choice of wits fit for letters; but war is a thing ſo perillous, and depending on ſuch deep councils, and it is of ſuch importance for a prince to know whom to truſt his power and eſtate with, that we ſhall do no meaner ſervice to the commonwealth in teaching this difference of wit, and its marks, than in the other differences

ces of wit we have deſcribed. You are to know then, that *Malitia* and *Militia*, as they have one name, ſo have they but one definition; for by the change only of one letter, each reciprocally paſſes into the other. What are the properties and nature of malice, *Cicero* recounts, when he ſays, that malice is nothing elſe but a ſly and wary proceeding in miſchief: and ſo it is in war; no other thing is acted, but how to offend the enemy, and to defend ourſelves from his ſtratagems; ſo that the beſt property of a general is to be *malicious* to his enemy, and not to interpret any of his actions in good part, but all in the worſt ſenſe that can be taken, and ever to ſtand upon his guard. *Believe not thy enemy; with his lips he ſweetneth, and his heart betrayeth thee, to make thee fall into the pit; he weepeth with his eyes, and if he light upon a fit occaſion, he will not be ſatisfied with thy blood*, Eccleſ. xii.

THE wit that is neceſſary as well to project ambuſhes and ſtratagems, as alſo to evade them, *Cicero* has pointed to us, in deriving the etymology of this word, *verſutia*, which comes, as he ſays, from the verb *verſor*, foraſmuch as thoſe who are winding, wily, double, and cavillers, in a moment play their tricks, and change their meaſures with eaſe.

THIS property readily to nick the occaſion, is a certain induſtry and ſagacity, which belongs to the imagination; for the powers which conſiſt in heat, perform their works with ſpeed, by reaſon of which, men of great underſtanding avail little in war; becauſe this faculty is but ſlow in its proceedings, being a friend of uprightneſs, plainneſs, ſimplicity, and mercy: All which occaſion great inconveniencies in war. Men of theſe qualities are not only unacquainted with the tricks and ſtratagems of war, but alſo are eaſily cheated, becauſe they truſt every body. Theſe men are good to treat with friends, with whom there is no need of the wiſdom of the imagination, but only of the integrity and ſimpleneſs of the underſtanding, which endures no tricks, nor to do wrong to any; but they are of no uſe to conteſt with enemies, who are overreaching with their wiles, and therefore there is always occaſion

occaſion for the ſame wit, to be on our guard againſt them. Warineſs muſt be practiſed with an enemy, frankneſs and ſimplicity only with a friend.

If then the general is not in the leaſt to truſt his enemy, but ever to ſuſpect that he may over-reach him, he muſt neceſſarily have a difference of imagination, that forecaſts, is wary, and can diſcover the deſigns which are covered under fair pretences. For the ſame power that finds them out, can only apply a remedy. It ſeems that this alſo is another difference of imagination, that deviſes inſtruments and machines, by means of which, fortreſſes are gained, tho' almoſt impregnable; camps are pitched, and each ſquadron marſhalled in due place; the fit opportunities of attacks and retreats are known; as alſo the ſeveral ſteps in treaties and capitulations with an enemy; for all which the underſtanding is no leſs impertinent than the ears are to ſee withal. Therefore I doubt not in the leaſt but that the art-military belongs to the imagination, ſince all that a good captain ought to do, carries with it conſonance, figure, and correſpondence.

The difficulty is to know what difference of imagination in particular is required in war. Which I cannot reſolve with certainty, becauſe it is a very nice enquiry. Yet I conjecture that the art-military requires a degree more of heat than the practice of phyſic, and that the choler be ſomewhat allayed, but not utterly quenched. Which is plainly ſeen in this, that the ſubtileſt and moſt intriguing captains are not the moſt couragious, nor deſirous of coming to blows, or giving battle, but rather by ambuſhes and ſecret ſtratagems gain their ends; a property that *Vegetius* was more pleaſed with than any other: *For good generals*, ſaid he, *are not thoſe that fight in a plain field, with equal danger, but rather ſuch as make uſe of ſecret ſurprizes, and without loſs of men, ever cut off the enemies force, or at leaſt hold them at bay.* The advantage of this kind of wit, the *Roman* ſenate knew; for tho' they had many famous captains, who won abundance of battels, yet at their return to *Rome*, to receive the triumph and glory due to their enterprizes, the wailings

wailings of the fathers for their dead children, the children for their dead parents, the wives for their husbands, and the brothers for their brethren, were so great, that they diminish'd the glory of the triumph. Insomuch, that the senate resolved no more to chuse such valiant captains, who took such pleasure in fighting, but rather men a little timorous, but very designing; such as was *Quintus Fabius*, of whom it is written, that it was a miracle to see him offer a pitch'd battle in open field, especially when he was far from *Rome*, whence he could not readily draw succours, if he were worsted. All he did, was to dally with the enemy, and make use of stratagems and tricks of war, by which means he performed great things, and gained many victories, without the loss of one soldier: Accordingly he was received at *Rome* with universal applause, because if he led abroad a hundred thousand soldiers, he returned home with as many, except those that were lost by sickness. The publick acclamations the people gave him was what *Ennius* has reported.

Unus homo nobis cunctando restituit rem.

As if he had said, The glory of this man was to beat the enemy without blows, or effusion of blood, and to return home without loss of men.

SOME captains since have endeavoured to imitate him: but because they wanted his wit, and his designs, they have often slipt fair opportunities of fighting, whence have proceeded more inconveniencies, and greater losses, than if they had given battle out of hand.

THE famous *Carthaginian* captain *Hannibal*, was a master in this sort of wit, and called, *the father of warlike stratagems*, being skilled in all the arts of circumvention, and all manner of plots requisite to ensnare his enemy.

THE marks by which he may be known who hath this difference of wit, are very uncommon, and well worthy consideration. *Plato* said, that he who would be master of this talent, can neither be valiant nor good-natur'd,

natur'd, becauſe prudence (as *Ariſtotle* has told us) conſiſts in coldneſs, but courage and valour in heat. Now as theſe two qualities are inconſiſtent, and contrary to each other, in like manner it is impoſſible that the ſame man ſhould be very valiant and prudent at once. Therefore it is neceſſary that his choler ſhould burn to ſuch a degree, as to become black, that he may be prudent; but where this kind of melancholy reigns, by reaſon of its coldneſs are ingendered alſo fear and cowardice: And it may be generally obſerved, that *if children are extremely timorous, it is a ſign they will prove very wiſe*; becauſe the materials they were raiſed from were much burnt, and of the nature of *atra bilis*. But there falls out a thing very obſervable, that of the four moral virtues, (prudence, juſtice, fortitude, and temperance) the two firſt require wit and a good temperament, to be put in practice; while fortitude and temperance are virtues which a man carries in his own hands, tho' he wants a natural diſpoſition to them; for if he makes but ſmall account of his life, and ſhew of courage, he may well do it; but if he be valiant by natural diſpoſition, *Ariſtotle* and *Plato* ſay very well, it is impoſſible for him to be wiſe, tho' he would: After this manner then there is no repugnance, but that a prudent man may acquire both courage and fortitude; for a wiſe man has the underſtanding to hazard his honour for his ſoul, his life for his honour, and his fortune for his life; as it daily happens. From whence it comes, that gentlemen being more honourable, ſignalize their bravery herein as volunteers in an army, and undergo all manner of fatigues, tho' they have been bred in the midſt of pleaſures; and all for fear of being eſteemed cowards. Whence came that ſaying, *God keep me from a gentleman by day, and from a thief by night*; for one *to be ſeen*, and the other *not to be known*, fight with double courage.

But however, if a gentleman had it in charge to encamp an army, and were to give orders to ſurprize the enemy, if he had not a wit proper for it, he would commit a thouſand blunders; becauſe prudence is not

in the hand of man. But if he had orders to guard a paſs, he might well be depended upon, even though he were naturally a great coward. The ſentence of *Plato* is to be underſtood, when a prudent man follows his natural inclination, and corrects not the ſame by reaſon. And ſo is it true, that the very wiſe cannot be couragious by a natural diſpoſition; for aduſt choler, which makes him prudent, the ſame, ſays *Hippocrates*, makes him timorous and a coward.

THE ſecond property the man ought to have that hath this difference of wit, whereof we treat, is to be mild, and good conditioned; becauſe he foreſees a thouſand things in his imagination, and allowing that the leaſt ſlip and miſcarriage may prove the loſs of an army, he ever has an eye to the main chance. But thoſe that know little, call carefulneſs, a toil; chaſtiſement, cruelty; mercy, ſoftneſs; ſuffering and diſſimulation, good-nature: Which proceeds only from the dulneſs of men, who diſtinguiſh not the worth of things, nor which way they are to be managed; but the prudent and wiſe are out of all patience, nor can they bear to ſee things ill managed, though they have no intereſt in them. And therefore *Solomon* ſays, *Eccleſ.* i. *I gave my heart to know wiſdom, and to know madneſs and folly, and perceived that this alſo is but vexation of ſpirit; for in much wiſdom is much grief; and he that increaſeth knowledge, increaſeth ſorrow.* As if he had ſaid, I have been a fool, and I have been wiſe, and I have experienced trouble in every thing: For he that fills his underſtanding with abundance of knowledge, reaps no other advantage, but to be more penſive and moroſe. By which it ſeems, that *Solomon* would have us underſtand, that he lived more contentedly in ignorance, than after he had received wiſdom. And ſo in truth it is, the ignorant live more careleſs, they are in pain for nothing, and they think no body in the world has more wit than themſelves.

THE third property of thoſe who have this difference of wit, is, that they are regardleſs of their dreſs; they are generally homely, ſlovenly, their ſtockings looſe about their heels, ſitting full of wrinkles

their cap ſlouching on one ſide, fond of old cloaths, never caring for change of ſuits.

Of this humour, (ſays *Florus*) was the famous captain *Viriatus*, a *Portugueze*, of whom (enlarging on his great humility) he ſpeaks, and affirms, that the pooreſt common ſoldier in all his army went not ſo meanly clad as he. Though, in truth, this was no virtue, nor did he do it with deſign, it being a natural defect of thoſe who have this difference of imagination, whereof we treat. The negligence of *Julius Cæſar* much deceived *Cicero*, for being asked (after the battel) the reaſon that moved him to take *Pompey*'s part, *Macrobius* tells us, that his anſwer was, *his girding deceived me*; as if he had ſaid, I was deceived in obſerving *Julius Cæſar* in ſuch an undreſs, never having his girdle tight, (whom the ſoldiers in way of a by-word, call'd *dangle-coat:*) though this ſhould rather have induced him to have believed, that he had the wit fit for a council of war; as *Sylla* could remark: ſo *Suetonius* has told us, who ſeeing this great captain, when a boy, and ſo careleſly dreſs'd, bid the *Romans, beware of the ungirt boy.*

The hiſtorians alſo take notice of *Hannibal*'s regardleſneſs of his cloaths, and his ſandals, and how little he cared to go neat, or ſpruce.

HIPPOCRATES, deſirous to ſhew the marks by which the wit and ability of a phyſician might appear, amongſt many others he found to that purpoſe, has ſet down as the principal, the dreſs and equipage of his perſon. He that is cleanly about his hands, often pares his nails, glitters with diamond rings on his fingers, wears perfumed gloves, and is very nice in every thing, one may very well ſay, is a man of ſmall underſtanding. *You may know*, ſaid he, *men by their cloaths; for the oftner you ſee them curious in their being modiſh, and ſpruce, the more you are to avoid them*; for theſe perſons are good for nothing.

But the reaſon of it is, that the great underſtanding and the great imagination deſpiſe the gaudy outſide, affected by the men, whoſe ſoul lies in dreſs, and who ſeem to be turned, as it were, inſide out: But

yet this is not their virtue neither; for it would be better that they observed a medium, and would so far condescend to the mode of the world, as to avoid singularity, and slovenliness, and appear decent.

IN the present age, and among us in *England*, there is so remarkable a difference, from the plainness affected by those heroes of antiquity, that one principal part of the glory of our modern soldiers, is dress and outward appearance; and it has been the sole inducement of many a gallant fellow, to despise occupation much better suited to his genius and capacity, purely for the sake of strutting, in time of profound peace, at the head of a company of better men than himself, in a scarlet coat, finely lac'd or embroidered; to which not many years ago, we remember, were added, the farther decoration of a rich golden net-work sash, and a fine feather, 'till the emulating vanity of their brother-heroes of the city trained-bands put this part of foppery out of countenance among the pretty fellows of the blade; for whose sake, 'tis to be hoped, that our author's doctrine may not be inculcated without some exceptions.

THE fourth mark and property, is, to have a bald pate; and the reason of it is plain, inasmuch as this difference of imagination, as also all the rest, have place in the fore-part of the head; and excessive heat burns the skin of the head, and closes the pores thro' which the hair is to pass; besides, that the matter whereof the hair is made, is, (as the physicians say) the excrements which the brain sends forth in the time of its nourishment; and by the great fire there, all these excrements are wasted and consumed, and so the matter fails whereof they are produced.

WHICH philosophy had *Julius Cæsar* understood, he would not have been ashamed of his bald head, since to cover this defect, he turned over his forehead the hinder part of his hair. And *Suetonius* tells us, that nothing was more pleasing to him than what the senate enacted, that he might always wear a laurel on his head, on no other ground than to cover his baldness. There is indeed another sort of baldness, which proceeds

proceeds from a brain hard, earthy, and of groſs parts; but this is a ſign of a man defective in underſtanding, imagination, and memory, and with which we have nothing to do.

THE fifth mark by which they are known who have this difference of imagination, is, that they are men ſparing in words, but full of ſentences; and the reaſon of it is, that their brain being hard and dry, they muſt of neceſſity fail in memory, to which belongs choice of words.

THE ſixth property is to be ſhame-faced, and to take offence at obſcene and filthy talk. And ſo *Cicero* ſays, that men who are very rational, imitate the modeſty of nature, who has hid the unſeemly and indecent parts, which ſhe made to provide for the neceſſities of mankind, and not for beauty, upon which parts ſhe would not have us caſt our eyes, or lend an ear to their names. And ſo in the hiſtory of *Julius Cæſar*, we meet with an act of the greateſt modeſty; for while he was ſtabb'd with poniards in the ſenate (ſeeing that there was no poſſibility of eſcaping death) he fell down on the floor, wrapping himſelf up in his imperial robes, ſo that after his death he appeared ſtretch'd out very decently, with his legs and other parts covered, which might be offenſive to the ſight.

THE ſeventh property, and the moſt important of all, is, that the general be fortunate and lucky; but this can hardly be called a ſeparate property, being the effect, principally, of the prudence and foreſight of the general; and therefore when we find a man prudent and wiſe; thus we ſhall know certainly, that he has the wit and ability requiſite to the art military. *Julius Cæſar* making uſe of great prudence in all his deſigns, was the happieſt general that ever was in the world; inſomuch, that in the greateſt perils he was wont to animate his ſoldiers in theſe words; *Fear not, for Cæſar and his fortune attends you.* By the word *fortune* intimating nothing more than that cuſtomary good ſucceſs, which always attended his actions, and which was the natural effect of his extraordinary prudence and foreſight.

HE that invented the game of chess, left a model of the military art, representing therein all the steps and contingencies of war. And in like manner, as in this play, fortune has no share, nor ought the winner to be call'd fortunate, nor the loser unfortunate; so the captain, who is the vanquisher, should be called wise, and the vanquish'd ignorant; and not the one fortunate, or the other unfortunate. The first order in the game was, that in *mating* the king the game is won; to shew us, that all the strength of an army lay in the good head of the leader, or general. And to demonstrate, that there are allotted as many men to one as the other; to the end, that, whoever is loser, may be assured, he wanted skill rather than fortune. Which yet appears more plain, if we consider, that a good gamester may give half the men to a worse, and yet for all that get the game.

ANOTHER order is, that the *pawns* are not to move backwards; to advise the general duly to forecast all chances before he sends forth his soldiers to a service; for if they miscarry, 'tis better to be cut off upon the spot, than to turn tail; because the soldier is not to know when time is to fly or fight, save by direction of his captain; and therefore as long as he lives, he is to keep his post, under pain of disgrace.

ANOTHER rule is, that the *pawn* which has made seven draughts without being taken, is made a queen, and may make any draught at pleasure, and takes place next the king, as one set at liberty, and made noble. From which we are to understand, that it highly imports in war, in order to make the soldiers valiant, to proclaim donatives, free camps, and preferments due to them that signalize themselves; especially if the advantages and honour are to descend to their posterity; for then they will behave themselves with greater courage and gallantry. And so says *Aristotle*, that a man values more the greatness of his family than that of himself. This *Saul* well perceived, when he caused it to be proclaimed in his army, what should be done to the man that kill'd *Goliah*, 1 *Kings* xvii. *That the king should*

ſhould enrich him with great riches, and give him his daughter; and make his father's houſe free in Iſrael.

THE reaſon of this is very clear in natural philoſophy; for there is no faculty of all thoſe that govern man, which will willingly work, unleſs there be ſome advantages to move it. From all which may be gathered, the importance of making the *pawn* a *queen*, which has made ſeven moves without being taken; for how many noble men ſoever there are, or have been in the world, have ſprung, and will ſpring from *pawns* and *private men*; who by their courage have done ſuch exploits, as they have merited for themſelves and their poſterity, the title of gentlemen, knights, lords, earls, marquiſes, dukes, and kings.

WHEN a man performs ſome heroick action, or gives proof of any admirable virtue, or extraordinary work, he may be ſaid to be new-born, and procures for himſelf new parents, and loſes that being which he had before. Yeſterday he was called the ſon of *Peter*, and nephew of *Andrew*; to day he is called, *The ſon of his own actions*; and though he was ever ſo obſcure before, his actions having ennobled him, he becomes the firſt of his family, and lays the foundations of a grandeur for his deſcendants that ſhall outvie the moſt ſplendid titles: In this ſenſe that gallant captain ſaid well, to a perſon of family, who upbraided him with the obſcurity of his birth: *'Tis true*, ſaid he, *you are deſcended from an ancient ſtem; but who ever did any more than hear of your anceſtors names for many generations? But I and my right-hand, (which I now acknowledge for my father) are better gentlemen than you and all your family: And if you diſpute this, let our prince and the commonwealth be judges between us.* —— And to this purpoſe it was that *Juvenal* rightly ſays, that virtue is the only true nobility.

I AM of opinion, that a man ought to have ſix things, that he may be ſaid to be honourable.

THE firſt, and moſt principal, is, his perſonal merit, in prudence, juſtice, ſpirit, and courage. 'Tis this that makes riches and birthright; from hence grow titles

of honour. From this beginning all the nobility in the world draws its origin.

THE ſecond thing that honours a man (next to his own merit) is riches, without which, we ſee no man eſteemed in a commonwealth.

THE third is, the nobility and antiquity of his anceſtors; for to be well born, and of honourable blood, is a jewel of great value; but not without a great defect; for of itſelf alone 'tis of ſmall advantage, as well to the noble, as to others, when reduced to neceſſity; but joined with riches, no point of honour is its ſuperior in the general eſtimation: Nobility is therefore well compar'd to a cypher in arithmetick, which is nothing of itſelf alone, but added to any number, encreaſes it.

THE fourth thing that makes a man eſteemed, is, to have ſome poſt or honourable office.

THE fifth thing, which though the lighteſt of all, is yet of ſome conſideration, is, to have a good ſurname, that is acceptable, and that ſounds well in the ears, and not to be called by ridiculous names, as ſome have been, who have thereby been led to change their names, to avoid being a by-word in every one's mouth. We read in the general hiſtory of *Spain*, a good example to the people: Two ambaſſadors being arrived from *France*, to demand of King *Alfonſus* IX. of *Spain*, one of his daughters in marriage, for king *Philip* their maſter, (one was very handſome, and call'd *Urraca*, and the other not ſo agreeable, and call'd *Blanca*). The two ladies being both together in the ambaſſadors preſence, every one looked that they would chuſe *Urraca*, becauſe ſhe was the elder, handſomer, and richer dreſt; but the ambaſſadors enquiring their names, ſtumbled at the name of *Urraca*, and choſe *Blanca*, ſaying, that name would be more welcome in *France* than the other,

THE ſixth thing that honours a man, is, the ornaments of his perſon, to go well dreſs'd, and have a good equipage, and a great train of followers.

BUT this may be reckon'd, in ſome meaſure, a digreſſion: To conclude this chapter, we have therefore only to repeat, that we have proved, that prudence and foreſight are the fundamental qualities of a man that would make a great figure in the military art; and that the virtues of fortitude and temperance, which are but ſecundary requiſites, may be acquir'd, even againſt habit, while thoſe of juſtice and prudence muſt be, as one may ſay, innate: And we ſhall only add, that perhaps no age ever produc'd a more illuſtrious inſtance of all that's advanced on this head, than the late great duke of *Marlborough*, who had the glory, never to be baffled in any of his projects: Who never ſat down before a town, but he took it, who never fought a battle, but he won it; which particular felicity muſt be owing, morally ſpeaking, to his extraordinary prudence and foreſight,

CHAP. XVI.

Of the difference of wit that is neceſſary to the office of a KING.

THE excellent *Spaniſh* author, from whom we have extracted the principal topics of the preceding ſheets, proceeds next to define the difference of wit that is neceſſary to the office of a KING.

HE ſays particularly, that as the office of a king goes beyond all other arts in the world, ſo it requires the higheſt difference of wit that nature can produce. And that of nine temperaments found amongſt men, there is but one (as *Galen* affirms) that makes a perſon as wiſe as nature can herſelf: In which temperament, the firſt qualities are ſo juſtly balanced, and ſo well proportioned, that neither the heat exceeds the cold,

nor the moist the dry, but all is found equal and harmonious, as if really they were not contraries, nor had any natural opposition: Out of which arises an instrument so well fitted and turned for the operations of the rational soul, that the man is provided with a perfect memory for things past, a strong imagination to penetrate into the future, and a great understanding to distinguish, infer, argue, judge, and make choice. Of the other differences of wit, which we have recounted, not one, says he, is entirely perfect; for if a man has a good understanding, (because of much dryness) he cannot learn the sciences belonging to the imagination and memory; and if he be furnished with an excellent imagination, (through much heat) he will be disabled for the sciences relating to the understanding and memory; and if he has a happy memory, (because of much moisture) we have already made it appear, how great memories are incapable of all the sciences. Only this difference of wit, which he is about to define, is that which answers all the arts in proportion.

HOW inconvenient is it, *proceeds he*, for one science not to be able to unite the rest, *Plato* notes, saying, that the perfection of each in particular depends on the knowledge of them all in general. There is no sort of knowledge at what distance soever it may be from another, that serves not to render it more perfect when it is fully known. *He says*, that the principal signs which distinguish this difference of wit, are the following:

THE *first*, in the words of *Galen*, is to have the hair nut-brown, between fair and red, which proceeding from age to age, comes to show more golden. And the reason of it is clear, for the material cause of hair, is, as physicians hold, a gross vapour, rising from the digestion performed by the brain at the instant of its nourishment. If there enter much flegm in the composition of the brain, the hair will be fair; if much choler, yellow as saffron; but when these two humours are found equally mix'd, the brain remains temperate, in hot, cold,

cold, moiſt, and dry; but the hair brown, and participating of two extreams, is very deceitful.

THE *ſecond* mark, that he ought to have who has this difference of wit, *Galen* ſays, is to be well ſhap'd, airy, agreeable, and pleaſant, ſo as the ſight takes pleaſure in beholding him, as a figure of rare perfection. And the reaſon of it is clear, for if nature be ſtrong, and have well-tempered materials to work upon, ſhe duly makes the beſt and moſt accompliſhed in the kind; being ſomewhat diſabled, ſhe employs moſt of her labour in the formation of the brain, becauſe that is the chief reſidence of the rational ſoul, whence we ſee many men vaſt and deformed, but yet of excellent wits.

THAT for what regards the ſtature, the middle-ſize is better than over-tall or ſhort: And if it ſhould incline to either extream, it is better too ſhort, than tall, for bones and fleſh much incommode wit, and big men have much moiſture in their compoſition, which dilates the fleſh, and makes it more pliant to receive the augmentation, which the natural heat procures. It fares quite contrary in little bodies, for through their over-dryneſs, the fleſh cannot take its courſe, nor the natural heat enlarge or ſtretch it out; and therefore they remain of a low ſtature. But amongſt the firſt qualities, we have prov'd before, there is none ſo prejudicial to the operations of the rational ſoul, as much moiſture, nor that ſo quickens the underſtanding as dryneſs.

THE *third* mark by which this difference of wit may be known, is, as *Galen* ſays, that he be virtuous, and of good conditions; for if he be lewd and vitious, *Plato* ſays, it is owing to ſome intemperate quality that is in him, and if ſuch a one would practiſe what is agreeable to virtue, he muſt firſt renounce his own natural inclinations. But whoever is of an exact temperament, ſo long as he continues in that ſtate, ſtands in no need of any ſuch diligence; for the inferior powers require nothing from him that is contrary to reaſon. Therefore *Galen* ſays, that to one that has this temperament, we need not preſcribe a diet, what

he should eat or drink, for he rarely or never exceeds the quantity or measure that physic would set him. And *Galen* contents not himself with calling them most temperate, but adds further, that it is not so much as necessary to moderate the passions of their soul, for their anger, their grief, their joy, and their mirth, are measured always by reason. Whence it follows, that they are always healthful, and never sickly, which is the *fourth* mark.

THE *fifth* property of those who enjoy this good temperament, is, to be very long-liv'd, as being very powerful to resist the causes and occasions of diseases; and this gives the greatest advantage imaginable to the prince, by strengthning his experiences, and blessing his dominions with a regular pursuit of councils and views, that must needs render them both prosperous and happy.

THE *last* mark is what naturally results from all the rest; for a prince form'd so excellently as is describ'd, must necessarily be very wise, of great memory for the past, of great imagination to penetrate into the future, and of great understanding to discover the truth in all things.

THESE are the requisites our author lays down for the person who shall well-execute the office of a king, but as such a happy temperament is very rarely form'd by nature, and an age produces not such a genius among all the sons of men, such great qualities are not to be expected often among princes, who generally succeed by lineal descent, and whose families, though they may have sway'd the royal sceptre for a long series of years, have not often produc'd more than one great man, who 'tis likely was the first sovereign of his race, and by his virtues (perhaps from an obscure beginning) transmitted the diadem to his remote descendants.

'TIS almost too melancholy a reflection for human nature to support, to ruminate on the wretched paucity of great genius's in the royal families of *Europe* for these last two hundred years. Since *Charles* the Vth. emperor and king of *Spain*, what have *Germany* or *Spain* produc'd worthy the glory of the imperial or royal name? —— The perfidy and wantonness of power of *Louis* XIV, by which he sacrificed the true happiness of his people

people and his own glory, to a wretched ambition, though a conſiderable genius, will not make a ſufficient exception for *France* to boaſt of any very great name ſince *Francis* I. and *Henry* IV.—*Guſtavus Adolphus* ſtands alone for *Sweden*; for the valour and brutal fierceneſs of the late *Charles* XII. had ſeem'd to be his only great qualities, and he appear'd totally abandon'd of prudence and conſideration, the chief glory of a great prince; and the exceeding miſeries to which he had reduc'd his ſubjects can never be aton'd for by his fortitude only. *Denmark* boaſts not one great name in all that ſpace of time we have mention'd; and the unhappy conſtitution of *Poland* fetters too much their ſovereigns to intitle them to the benefit they now and then might expect from their elections, if they were ever ſuffer'd to be free from the intrigues and chicaneries of their powerful neighbours, which, on a vacancy, joyn'd to their inteſtine brangles, take place, and throw 'em into confuſion, and often cauſe them to chuſe the leaſt deſerving.

As for *Ruſſia*, before the late *Czar Peter* the Great, thoſe vaſt dominions made the moſt contemptible figure of any nation upon earth, and he ſtands alone the glory of his country, and indeed unrivall'd by the greateſt of all the princes among the moderns: who firſt having inſtructed himſelf in the arts of government, of war, of navigation, and in all the ſciences, became a painful ſchoolmaſter to the moſt barbarous and moſt indocile people in the chriſtian world. The *Portugueze* have not one extraordinary genius to boaſt in all that ſpace: The *Ottomans* keep their footing in *Europe*, only by reaſon of the diſſenſions among the chriſtian princes, and have been dwindling for a century: And, ſetting aſide the fifth and ſeventh *Henries*, queen *Elizabeth*, and the late great king *William* the third (who was too much cramp'd and mal-treated to exert his great genius as he would otherwiſe have done) what have the *Engliſh* to boaſt, if we ſay nothing of his * preſent majeſty, as we have not included the now reigning ſovereigns of any of the nations we have particulariz'd,

* *N. B.* This was written in the latter end of the Reign of his late Majeſty King GEORGE I.

becauſe

becauſe no man can preſume to give characters of the living, ſince none can properly be ſaid to be great or otherwiſe, 'till they have finiſhed their race of glory or infamy, and had their triumphs or diſgraces ended by death. We have ſaid nothing of the two new kingdoms of *Sardinia* and *Pruſſia*, becauſe the one is the firſt, and the other the ſecond prince that have ever been of thoſe names and titles: Nor yet of the inferior ſovereign houſes, becauſe they are too much circumſcribed to be able to exert themſelves in a courſe of glorious actions; except, indeed, the family of the *Naſſau*'s princes of *Orange*, who have been noted for ſome ages, to have bleſs'd the world with a conſtant ſucceſſion of heroes, who had they been born to a powerful crown, would have ſhone among the firſt of princes.

FROM all that has been ſaid, we are not to expect, that any nation can be often bleſt with princes of the temperament and capacity before-mentioned. And indeed the whole race of mankind, ſeems to be dwindling and degenerating apace, not only from the greateſt examples, but into vices and immoralities that are ſhocking to nature, to morality, and of the moſt pernicious tendency to the well-being of civil ſociety. —— But let us ceaſe theſe diſagreeable reflections, and purſue our ſubject, that having laid down directions whereby to judge of the Education proper for different capacities, according to the principles of natural philoſophy, we may now give ſome practical rules for Education that are more peculiarly adapted to the *Engliſh* taſte and genius: which may be look'd upon as our mite, thrown in with a ſincere and good intention, to better the age in which we live, or at leaſt to help to improve that which is riſing to ſucceed us.

BEFORE we purſue our intended deſign, it may not be improper in this place, to collect together in one view, the principal heads of the preceding ſheets, which at the ſame time, that they will direct the Reader to ſuch particulars as may be moſt to his purpoſe, will be of uſe to him in peruſing the rules we ſhall venture to lay down, in the ſubſequent pages relating to this important ſubject.

A Brief

A Brief

ABSTRACT

Of the preceding

WORK.

CHAP. I.

p. 1. *WHAT wit is, and what differences of it are ordinarily obſerv'd among men. Definition of the word wit.*

p. 2. *Wit, a generative power, which becomes pregnant, but wants a midwife to deliver her.*

Notion, or idea, the offspring of wit.

p. 3. Cicero's *definition of wit.*

His definition too ſhort.

p. 4. *A ſtrong memory impedes the copiouſneſs of the underſtanding.*

A ſharp underſtanding and good ear, may make great progreſs in knowledge by the contemplation of natural things, without a maſter.

Obſervations on a ſaying of Plato, *and on* Solomon's *famous petition for wiſdom.*

p. 5. *According to* Plato, *the greateſt wits requir'd for divine ſtudies.*

p. 6. *Many perſons ſet to ſtudy divinity, that ſhould rather have been ſet to till the earth.*

Ariſtotle's *deſcription of a learned man.*

Differences of wit.

p. 7. *The master's labour, without a genius in the scholar, ineffectual.*
Hardly any sciences to be learn'd without a master.
Adam, *of all mankind, the only one who came into the world perfectly instructed.*
p. 8. *The innate excellency of some sorts of wit.*
The enthusiastic or poetic wit.
p. 9. *Recourse had to universal causes, before particular ones, unphilosophical.*
The poetical enthusiasm owing principally to the temperament.
The four governing faculties in men.
Great strength of body, a sign of gross sense, & vice versâ.
p. 10. *What temperament is requir'd by a tenacious memory.*
A good memory incompatible with a good understanding.
Democritus *of so perfect an understanding, that he lost his imagination.*
p. 11. Hippocrates's *opinion of* Democritus.

CHAP. II.

The differences amongst men unqualify'd for science.
To call a man fool, the greatest indignity that can be offer'd him.
p. 12. *The capacities of youth to be diligently attended to.*
A learned fool, or meer scholar, a most contemptible character.
Employments adapted to genius, the way to make all men excel and be useful.
Three different kinds of incapacity.
p. 14. *A fourth defect among men of letters.*

CHAP. III.

p. 15. *The child who has neither wit nor ability requisite to the intended science, cannot prove a great proficient, though he have the best masters,*

many books, and ſhould labour at it all the days of his life.

An example of this in Cicero's *ſon* Marcus.

All the aſſiſtances in the world of little uſe to a mind naturally incapable of ſcience.

p. 16. Xenocrates *call'd by* Plato *his hopeleſs ſcholar.*

Cleanthes *provok'd to excel by ſhame.*

Demoſthenes *almoſt a man before he could ſpeak.*

Theſe examples made Cicero *hope to conquer his ſon's incapacity.*

The true reaſons of Tully's *miſtake.*

Sciences natural to thoſe only who have wits for them.

p. 17. *A maſter ſhould narrowly ſift a ſcholar's ability, and if he finds him incapable of learning, ſhould refer him to ſome other imployment.*

Thoſe who are unapt for one ſcience, fit for another.

Remarkable inſtance of the difference of genius in three ſchool-fellows.

p. 18. *If there were examiners of wits in the public Colleges, there would be frequent removes of ſcholars from one ſtudy to another.*

Many youths of narrow fortunes would be preferr'd to rich dunces.

The child's inclination to be ſounded, before he is apply'd to any particular ſtudy.

Man's wit compar'd to the earth.

Childrens memories, why more retentive than thoſe of men.

Plato's *reaſon for ſetting good examples to children.*

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Languages to be learn'd in the tendereſt age.

Logic and argumentation in youth.

The ſpeculative ſciences at manhood.

Ariſtotle's *opinion of the age proper for natural philoſophy.*

Reaſons why children ſhould not ſtudy in or near home.

What is requiſite to a good maſter.

p. 20. *Order and firſt principles, neceſſary parts of education.*

The

The memory not to be loaded with variety of lessons or studies; but the learner to be kept to one point till he is master of it.

Indefatigable study necessary to complete a learned man.

Wit, like other things, has its several stages.

p. 21. *At what age the understanding is at the greatest perfection.*

No author, that would be consistent with himself, should publish his works before he is 33 years old.

Some exceptions however with regard to different constitutions.

What persons promise long, and what short life.

By force of a natural genius, a man may surmount all manner of disadvantages.

Cicero's *saying of attempting to strive against nature.*

CHAP. IV.

p. 22. *That nature only qualifies a man for learning.*

Nature qualifies, art facilitates, but experience gains the mastery.

God the author of every perfect gift.

p. 23. *We ought not to interest the Almighty in every trifling accident, and apply to supernatural power, those effects which are owing to meer natural causes.*

A familiar story of a conversation between a gardener, a grammarian, and a natural philosopher, illustrating this point.

The vulgar, who are unacquainted with natural causes, should however be indulg'd in this way, rather than be thrown upon a worse.

p. 24. *God the author of nature.*

How Aristotle's *assertion,* That God and Nature never make any thing in vain, *is to be understood.*

God's wisdom in creating the world in such perfect order, that it has suffer'd no change from the beginning.

Aristotle's *definition of nature.*

All

All rational souls, as souls, of equal perfection.

The temperament of the four first qualities, the reason of the difference of mens abilities and inclinations.

p. 25. *Diversity of wit proceeds not from the soul, which is in all ages the same.*

This different temperament which influences the soul to act differently in the same body, as it alters in different stages, by physicians and philosophers call'd Nature.

The above opinion corroborated by Galen.

The influences of climate, diet, air, on the soul of man.

The diversity of nations, as to their bodily frames and the turn of their souls, owing to this difference of temperament.

p. 26. Galen's *opinion, that men of penetration should be appointed to examine the different capacities of youth.*

CHAP. V.

What power the temperament has to make a man wise and good-natur'd.

Hippocrates's *assertion, that the soul is invariable, but the body always changing;*

And that man proves stupid or ingenious, according as he is acted by the elements of fire and water.

p. 27. Galen's *error, in carrying this doctrine too far.*

The soul the agent, the body the patient.

If virtues and vices were habits depending purely on the constitution, it would destroy the doctrine of free-agency in men.

p. 28. *Contrary to this, the observation that there are many persons who are virtuous in spite of constitution.*

Wise men commit many indiscretions; unwise perform many discreet actions; which are proofs, that prudence depends not altogether upon the frame of body, but on the soul.

Hippocrates,

Hippocrates, Galen, Ariſtotle *and* Plato, *all miſtaken in this belief.*

Perfect virtues are ſpiritual habits.

Organs of the body, however, may contribute to impede the good purpoſes of the mind.

This corroborated by the words of St. Paul.

p. 29. *What temperaments neceſſary to the attainment of ſeveral religious habits.*

Ariſtotle's *praiſe of a good temperament.*

Hippocrates *and* Galen *prefer the equal temperament.*

But many philoſophers of a contrary opinion.

p. 30. *Perſons of equal temperament of ſweet temper, and inoffenſive.*

Why ſome phyſicians diſapprove of this equality.

The ſpring and autumn, why more fruitful of diſeaſes.

Cold more conducive than heat to preſerve virtue, and prevent undue ferments in the rational ſoul.

Fear, and a pale countenance, the effects of cold.

Abſtinence of uſe to mortify the natural heat, and preſerve the virtues of the ſoul.

Hippocrates *againſt the faſting of children.*

p. 31. *Sleep the greateſt fortifier of our heat.*

Waking generates crudities, cools the vital parts, and inflames the outward.

Sleep warms the inward parts, and cools the outward.

Hence he that ſleeps ill, is ſubject to cold diſeaſes.

Much fleſh, according to Hippocrates, *a ſign of a feeble mind.*

Prayer and deep meditation attracts the heat to the brain, and leaves the other parts frigid.

Feeling, according to Ariſtotle, *the nobleſt and moſt uſeful of the ſenſes.*

p. 32. *A weak ſtomach in learned or ſtudious men, a bad indication.*

The ſtomach, according to Celſus, *to be principally fortify'd in ſtudious men.*

Men of great genius generally melancholy.

A cold conſtitution the beſt quality for the rational ſoul.

Five different ſtages of man's life, each of which has its peculiar temperament.

The ſtate of infancy, its virtues and vices.

p. 33. Plato *from the very firſt year gave rules for inſtructing a child,*

The temperament of the ſoul in the ſtate of Adoleſcency.

Difference of the temperament between the ſtate of Youth *and* Infancy.

The uſual temperament in the ſtate of Manhood.

p. 34. *The paſſions predominant in this ſtate.*

The danger of this ſtate to the ſoul.

A greater temperature of body attends a man in his Middle Age.

Imperfections of the laſt ſtage, Old Age.

p. 35. *As the body loſes its vigour, the ſoul (newly diveſted of the clogs of matter) increaſes in virtue.*

Ariſtole *however imputes ſix imperfections natural to old age.*

Theſe are, They are cowards, *becauſe their fire is extinguiſh'd.*

They are covetous, *tho' in their laſt ſtage.*

They are ſuſpicious, *from the tricks they have ſeen in the world.*

p. 36. *They are* diffident *and hopeleſs in their undertakings.*

They are ſhameleſs, *wanting blood, which baſhfulneſs proceeds from.*

They are incredulous, *becauſe of the jugglings they have ſeen.*

Young children have all the oppoſite imperfections.

The ſexes have the like differences as the reſpective ages.

Different climates have their peculiar virtues and vices.

Meats and drinks feed their particular virtues and vices.

But ſtill man left a free agent to chooſe as he pleaſes.

For the worſt conſtitutions can only excite.

Man

Man by contemplation may acquire a habit different from his natural one.

Three powers in man, memory, ſenſe, and imagination.

Of theſe, the imagination only a licentious power.

p. 37. *The operations of the imagination.*

How 'tis in our power to ſtrengthen one faculty, and depreſs another.

Which lays the fault of not ſubjecting our paſſions to reaſon at our own door.

The uſe of ſtudying divine matters to aſſiſt our good purpoſes.

A man naturally impudent, incurable but by divine grace.

CHAP. VI.

p. 38. *What part of the body ought to be well temper'd, that the child may be witty.*

The philoſophers before Hippocrates *and* Plato, *believ'd the heart to be the chief ſeat of reaſon.*

Holy Scripture accommodates itſelf to that way of ſpeaking.

But theſe two great philoſophers prove the brain to be the chief ſeat of that divine faculty.

Their opinion generally follow'd.

Ariſtotle, *for the ſake of oppoſition to* Plato, *only adheres to the old opinion.*

p. 39. *Four qualifications of the brain requir'd by the rational ſoul conveniently to perform its principal operations.*

Four other things requir'd under the good configuration of the brain.

What outward form or ſhape the head ought to have according to Galen.

What ſhape of the head a ſign of a dullard.

The brains of two large oxen join'd, not equal in quantity to the brain of one man.

Thoſe brutes which come neareſt man in cunning, have more brains than larger animals.

A little head, according to Galen, *defective, becauſe it wants room for brains.*

A jolt head, being moſt fleſh and bones, and like a thick-rind orange, deſtitute of pulp and juice, as bad an indication.

p. 40. *The rational ſoul immers'd in a great quantity of fleſh, a bad indication.*

The ſoul of a very fat man, according to Chryſippus, *of no other uſe than to keep his body from ſtinking.*

Ariſtotle *compares a fleſhy head to that of an aſs, which, for his proportion, is the moſt fleſhy of all beaſts.*

Two ſorts of corpulent men.

The black fumes and vapours ariſing from the ſtomach and liver at the time of digeſtion, greatly overcloud the ſoul.

p. 41. *A ſpare body and abſtinence as much elevate it.*

Why nature has made wiſe mens heads of a delicate frame, and eaſy to be diſorder'd.

The communication between the ſtomach and brain, and how the diſorder of the one affects the other.

Four ventricles neceſſary to be in the brain.

A continuity of parts alſo requiſite in the brain.

Where this continuity has been broke, what bad conſequences have enſued.

The brain ought to be of moderate heat.

And to be compos'd of very fine and delicate parts.

p. 42. *The brains of brutes compos'd as thoſe of men.*

Have alſo a temperament *of the* four firſt qualities.

Agree with man in the actions of the vegetative ſoul.

Have the like organs *for nouriſhment.*

Agree alſo with man in the ſenſitive ſoul.

Likewiſe in local motion.

And in memory *and* fancy.

The underſtanding *the ſole faculty that differences man from beaſt.*

CHAP.

CHAP. VII.

p. 43. *That the vegetative, ſenſitive, and rational ſouls are knowing without teachers, when they meet with a temperament agreeable to their operations.*

Temperament of the four firſt qualities rightly call'd nature.

Surprizing, but natural effects of this temperament in plants, animals, and men.

p. 44. Inſtinct of nature, *a term the antient philoſophers recurr'd to, when they were to account for things beyond their comprehenſions.*

Hippocrates, Plato, Ariſtotle, *refer theſe operations to the temperament we call nature.*

Galen *imputes to ſupernatural, what is the effect of ſecond cauſes.*

The imperfections in the human body, which enſue upon an improper temperament, an argument againſt Galen's *opinion.*

p. 45. Plato's *opinion better grounded, that the firſt man only was made by God, the reſt produc'd by ſecond cauſes.*

What temperament requir'd by the vegetative *ſoul.*

On what the excellency of the ſenſitive *ſoul depends.*

Galen's *method to diſcover the effects of the ſenſitive ſoul.*

p. 46. *Inſtances exploding the notion of natural inſtinct.*

p. 47. *Theſe inſtances prove the temperament of the four firſt qualities, to be the reaſon of one beaſt's excelling another of the ſame ſpecies.*

A farther inſtance in the ant, and in a hawk.

A controverted point between Plato *and* Ariſtotle *how men come by knowledge.*

Plato's *opinion, that the ſoul is older than the body,* &c.

p. 48. *This opinion erroneous.*

Ariſtotle's *opinion likewiſe erroneous.*

The true notion by what means man attains to knowledge.

p. 49. *The natural temperament, by ſome called inſtinct, how it inſtructs infants to purſue what makes for their preſervation.*

But theſe acts in children, adapted only to the vegetative and ſenſitive ſtate, as in brutes, and not the rational, as in grown perſons.

What effects the change of temperament in men, by ſickneſs, &c. *is attended with.*

p. 50. *Further remarkable inſtances of the effects of this change.*

p. 51. *Choler a neceſſary requiſite to a good poet.*

Inſtances of frenzy heightening a poetical capacity.

And even of creating a poetical capacity where was none before.

Hiſtory of a page, who while delirious in ſickneſs, was exalted to extraordinary perfections of genius; but, cur'd, return'd to the ſame humble capacities he had before.

p. 53. *Further inſtances of the* Spaniſh *author of the force of this delirious enthuſiaſm.*

Perſons who have a proper diſpoſition for peculiar attainments, able to do ſurprizing things.

p. 53. *Inſtances of this from* Ariſtotle.

Hippocrates *gives the name of divine to ſuch wonderful effects.*

The temperament, and not inſpiration, the reaſon why the children of the ſame parents ſhall differ in their capacities, and one be a poet, and the other a dunce.

p. 54. Tully *of perſons who are ignorant of natural cauſes.*

Cicero's *obſervation upon the different capacities of man.*

p. 55. *Men endow'd with capacity to diſtinguiſh three differences of times; the* paſt *by his memory, the* preſent *by his ſenſe, the* future *by his imagination and underſtanding.*

Why Tully *believ'd the ſoul incorruptible.*

Contrary inſtances to the opinion of Hippocrates, *That diſtemper'd perſons, who ſeem to have the gift of præſcience, ſeldom recover.*

The ignorant can only judge of things paſt.

p. 55. *But the prudent and discreet faintly imitate God with regard to foresight.*

Tho' in a much less certain manner than inspired persons were endowed with.

CHAP. VIII.

p. 56. *All the difference of wit in man proceeds from the three qualities of* heat, moisture, *and* dryness.

Each action requires a different instrument.

One organ in the brain to understand, *another to* imagine, *and a third to* remember.

Yet these different organs not distinguishable on dissection.

p. 57. *For there are many compound things in man's body, which our senses judge to be simple.*

Use of the fourth ventricle in the cavity of the brain.

Reasoning and the digestive faculty extremely opposite in their operations.

The wisdom of Providence in placing the liver at so great a distance as it is from the brain.

No man studies with the same edification immediately upon eating, as some time after.

Office of the fourth ventricle.

p. 58. *The use of the three little cells before.*

The three faculties, the understanding, the memory, and imagination joined and united in each ventricle.

Objection, that the three ventricles are superfluous, if the same powers be join'd in each, answer'd.

p. 59. *The rational soul, while in the body, cannot exercise her operation without the mediation of corporeal instruments.*

Of the four qualities, viz. *heat, cold, moisture, and dryness, that of cold, according to* Galen, *of no use in the operations of the rational soul.*

p. 60. Aristotle *of the contrary opinion, who asserts, that a more delicate sense and understanding, proceeds from the thinner and cold blood, than from the hot and thicker.*

p. 60. *His reaſons why men in hot countries are generally more ingenious than in cold.*
Men of very hot brains, according to that philoſopher, are volatile and changeable.
With which opinion Galen *alſo coincides.*
But this muſt be taken only with regard to moderate cold.
Too intenſe a heat the cauſe of fickleneſs and inſtability of mind.
p. 61. *The effects of cold on the faculties of the mind.*
Another kind of ſteadineſs, which proceeds from the compactneſs of the underſtanding.
Dryneſs, moiſture and heat, are inſtruments of the rational faculty.
Ants and bees, who may diſpute with men for wiſdom, have a cold and dry conſtitution.
The hog, a moſt ſtupid beaſt, of a moiſt one.
This confirm'd by Pindar *in his ſarcaſm on the* Bœotians.
p. 62. *Too much natural heat in the blood, replete with vapours.*
Wiſe mens children generally defective in wit.
All the great men in ſciences, melancholic.
The prophet Iſaiah, *with great truth, attributes to vexation or ſorrow the improvement of the underſtanding.*
A ſtream of good fortune relaxes and moiſtens the brain too much.
And impairs the underſtanding.
Diſpoſes to ſports, feaſts, muſic, and indiſpoſes to ſtudy.
p. 63. *Hence the changes in the diſpoſition that frequently occur, even in a wiſe man, ſuddenly promoted from indigence to plenty.*
The memory alone, of all the faculties, not hurt by moiſture.
Why we call memory a rational faculty.
Proper office of the memory.
Memory a coffer or repoſitory, according to Galen, *for the underſtanding.*

p. 64. *Why the memory is readier in children than grown persons.*

Ariſtotle's *reaſon why childrens memories are readier than thoſe of men.*

His difference between the morning and evening memory.

Ariſtotle *miſtaken in his aſſertion.*

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p. 65. *For a ſlaviſh dependance on the opinions of our predeceſſors may increaſe our faith, but not improve our knowledge.*

Moiſture the true reaſon of a good memory, dryneſs of a ſound underſtanding.

Hence children who have a moiſt brain remember beſt; old men who have a dry brain, have moſt underſtanding.

The true reaſon why the memory is better in the morning than in the evening.

p. 66. *Great memory and great underſtanding naturally incompatible.*

Difference between memory and remembrance.

Imagination ariſes from heat.

The imagination contrary to the memory and underſtanding alſo.

p. 67. *But three principal differences of wit in men, correſpondent to the three primary qualities.*

Tho' the underſtanding is benefitted by dryneſs, and the memory by moiſture, yet an exceſs of either detrimental to each.

Three principal actions of the underſtanding, *to diſcourſe, to diſtinguiſh, to chuſe.*

p. 68. *The* memory *alſo divided into three; that which readily receives, and as ſoon loſes; that which receives with difficulty, and retains long; and that which eaſily receives, and is long a loſing.*

The imagination has three differences alſo; from each of which ariſe three others.

The

p. 68. *Three different sorts of capacities;*
1. *The half-witted, or smatterers, who are uncapable of the abstruse or subtle parts of what they study; but with ease get over the easy parts.*
2. *The more docile, who receive strong impressions of all they study; but require infinite pains and able masters to understand the sciences, and after all are not able to walk without the leading-strings of other mens labours.*
3. *The perfect wits; who from the brightness of their own parts, penetrate every thing with very little assistance.*
p. 69. *These the only fit genius's for writing books, & giving rules to others.*
The two first classes ought to be discourag'd writing, since they can be only collectors and plagiaries.
The third sort, why term'd capricious wits *by the* Tuscans.
They are of great use to a master of a school, to be at the head of the other two.

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p. 70. *Some doubts and arguments against the doctrine of the last chapter, answer'd.*
The uncertainty of human wisdom.
Objection I. *propos'd, and answer'd.*
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Distempers which impair the understanding, often leave the memory and imagination vigorous.
This point discussed and adjusted.
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This occasioned temples to be dedicated to memory, as a goddess.
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Object. II. *propos'd and answer'd.*
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Natural reason for the difference of the flesh of women and children from that of men.
Choler and melancholy harden the flesh.
Soft and delicate flesh a sign of weak intellectuals.
Easy in men of equal temperament to guess at their wits by the softness or hardness of their flesh.
Signs from the hair to be attended to, in judging of wit.
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Natural

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p. 82. *Atra-bilis, or adust choler, according to* Aristotle, *the right humour for wits.*
The nature of the wit of Cicero.
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The true, open and upright wisdom to what to be attributed.
p. 83. *The nature and composition of* slow wit.
Much plodding does good to some constitutions, harm to others.
Whence the extemporare capacity proceeds.
Too much coldness or dryness in some the cause of a slow wit.

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p. 84. *Each difference of wit is appropriated to the science with which it most particularly agrees. Brief instances thereof.*
All the arts settled upon certain universal principles.
Only the art of poetry requires a peculiar and innate talent.
But in effect there is no art or science but requires a genius peculiar for it.
The duty of parents or tutors to find this out.
Sometimes a native genius forces itself out of the course it has been put to study, into that more suitable to its talents.
p. 85. *'Tis necessary to be attended to, that some occupations require a good* memory, *as grammar and languages, the theory of the law, positive divinity, cosmography, arithmetic.*
Some a good understanding, *as school-divinity, the theory of physic, logic, natural and moral philosophy, and the practice of the law.*
These postulata prov'd in three or four sciences.
And first as to languages, *which require memory.*
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p. 87. *A remarkable instance of an excellent school-divine's incapacity to attain pure latin.*

p. 88. *A second remarkable instance of another divine.*

Great poets seldom have a good understanding.

p. 89. *This proved in the famous poet* Pope.

And by an instance from Aristotle.

The true reason of this; viz. *that the degree of heat that is necessary to inflame the imagination in poetry, is too excessive for the understanding.*

Cicero *also an instance of the truth of this.*

p. 90. *The most judicious criticks, who seldom make good poets, a further proof of this observation.*

Mr. Rymer *a proof of this assertion, and some would name Mr.* Dennis.

Socrates *a further instance of this truth.*

A good vein of versifying in a youth, therefore, a good prognostic to judge of his genius.

The fine vein of low humour peculiar to dean Swift: *utterly unqualifies that singular genius for the severer studies.*

How would the world be surpriz'd at a proposal to print a body of divinity, or collection of sermons of this uncommon author's!

His great improvements in romance.

And particularly of the renowned history of Tom Thumb.

p. 91. *Musick-masters, choristers, &c. a further proof.*

Fair writing a work of the imagination.

A singular instance of this in a certain learned divine.

An extraordinary instance of an excellent English *genius, being incapable of writing legibly.*

p. 92. *Youths that affect to flourish and to draw, what their genius bends to.*

To read with a good grace, discovers a certain kind of imagination

A good reader what fit for.

——— *Seldom a person of good conversation.*

The game of chess, of use to discover the force of the imagination.

p. 93. *Students neatneſs in their books and chambers, (as the finical dreſſes of beaux) diſcover a genius of imagination, contrary to that of underſtanding.*
Agreeable drolls, and perſons who converſe pleaſantly in the ſame predicament.
What the genius of ſuch perſons is beſt ſuited to.
Error of a vulgar obſervation with regard to ſuch perſons abilities.
Slowneſs of ſpeech in children accounted for.
This quality in childhood, a ſign of a great talker in maturer years.
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That eloquence and politeneſs of ſpeech are ſeldom to be found in men of great underſtanding.
The errors of the vulgar on this head.
p. 95. *The* Athenian *ignorance of this doctrine, a reaſon of their wonder that* Socrates *wanted the gift of utterance.*
The bad ſtile of Ariſtotle, *the obſcurity of* Plato, *the unperſpicuity of* Hippocrates, *the unconverſibleneſs of* Virgil, *and the rude ſpeech of S.* Paul, *ſo many inſtances of the truth of this doctrine.*
Wherein, however, St. Paul's *temperament was the moſt accommodated to his vocation and miniſtry that could be.*
p. 96. *Even ſupernatural gifts, when they fall upon a ſuitable genius, more efficacious than if they fell on the contrary.*
St. Jerome's *reaſon why the ſame holy ſpirit that ſpoke elegantly in the mouth of* Iſaiah, *ſpoke in that of* Jeremiah, *in the ſtile of a peaſant.*
p. 97. *Why languages and politeneſs of ſpeech accord with poſitive divinity.*
A deſcription of a perſon of ſuperficial underſtanding.
The vulgar moſtly taken by ſuperficialiſts.
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p. 98. CHAP. XII.

That the theory of divinity belongs to the understanding, and preaching (which is the practice) to the imagination; and of the requisites of a good orator.

p. 99. *A good understanding and a great imagination seldom meet in one person.*

The most voluble preachers have the shalloweſt understanding.

They only lightly skim over the surface of the sciences.

Mankind generally taken by sound rather than sense.

The sense of a man of profound genius, lies too deep for the vulgar to fathom.

The former voluble sort should never print their works.

The latter should write rather than preach.

p. 100. *Oblivion the fate of the one; eternity of the other, in his works.*

Rules laid down to qualify men for orators.

A suitable argument *should be the first choice of an orator.*

An exuberant invention *a great requisite.*

A quick imagination like a setting dog.

Much reading and a good memory *necessary to supply the want of invention.*

p. 101. *Book-learning, however, bounded and limitted, and not comparable to a good invention.*

Order *and* regular disposition *another requisite to an orator.*

Action *the most important qualification of an orator.*

Action the spirit and life of elocution.

A remarkable instance of the efficacy of this gift.

What discourses suffer for want of action, and what require it not.

The style in speaking well, different from that in writing well.

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Unaffected and elegant Language, *another requisite of a good orator.*
A good voice another necessary property of such as would be orators.
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Why melancholic men are not ready speakers.
Why the choleric, unmov'd, speak well; but provok'd, ill.
And the phlegmatic vice versâ.
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Aristotle's *reason why men of slow speech speak loud.*
All the above qualities of an orator are the effects of imagination.
Orators crop the flower of reason only, and go not to the root.
p. 105. *No rule so general, but admits of some exception.*
'Tis possible, tho' very rare, that all the faculties may unite to make a great genius.
This genius, if it were frequently to be found, the most adapted to preaching.
Next to these, melancholy adust is the properest temperament.
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Pleaders encouraged to undertake any cause, by the
diversity and uncertainty of the judges opinions.
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Rule to judge of a capacity for this study.

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mory, and part to the understanding; and the
practice, to the imagination.
Two things necessary in a physician; right method
and great practice.
Every man has his proper and peculiar state of
health.

p. 111. *The physician ought to be acquainted with the pa-*
tient's constitution.
This not sufficiently attended to in the present practice.
What qualifications requisite for the theory of physic.
Different abilities in the professors of physic.
Difficulty to meet with a genius suitable to this art.

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to the imagination.
Reason why the knowledge of men of great under-
standings lies in universals and not in particulars.
Imagination is an impression struck from exterior
sense.

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understanding.
What a good physician does before he undertakes to
cure a disease.

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gination.
Imagination in this case may be term'd sagacity.

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The most common things in any art, and the easiest
to learn, are the most important.

And

p. 115. *And,* vice versâ, *the most puzzling and subtile, the most unnecessary in practice.*
This enables a man of greater imagination than understanding to arrive at a tolerable perfection in this art.
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Exemplify'd in the cases of great personages.
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A good nurse does less harm in some distempers, than irresolute and ignorant physicians.
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To what difference of wit the military art belongs, and by what marks the man may be known who has it.
Prudence preferable a general in to bravery.
p. 118. *The word* military *whence deriv'd.*
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No credit to be given an enemy.
Cicero's *description of the wit necessary for warlike stratagems.*
To nick the occasion, a work of the imagination.
A good understanding only, not a warlike qualification.
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A warlike genius beholden to the imagination.
A greater degree of heat requir'd in war, than in physic.
Unbloody victories the most glorious.
p. 120. Quintus Fabius's *example most worthy of applause.*
Ill imitated by persons who wanted his capacity.
The great Hannibal *a master of this sort of wit.*
Plato's *marks of this difference of wit.*

p. 121. *To be very valiant and very prudent, incompatible.*
Timorouſneſs in children, a ſign of future wiſdom.
Prudence and juſtice require a good temperament;
But Fortitude and temperance in a man's own power:
So that a prudent man may acquire courage, and form a conſummate character for war.
Point of honour ſtimulates perſons well-born to brave exploits.

p. 122. *To be good-condition'd a ſecond property requiſite to this difference of wit.*
Several errors of the vulgar, in miſcalling actions and things.
Much knowledge makes a man more ſenſible of his own imperfections.
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Careleſſneſs of habit, a third property of a natural warlike genius.

p. 123. Viriatus, *a famous* Portugueze *captain, a proof of this obſervation.*
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Hippocrates's *judgment of a perſon of mean underſtanding.*
Great underſtandings deſpiſe a gaudy outſide.

p. 124. *However, a medium and decency in habit moſt eligible.*
Our preſent Engliſh *heroes dwindled to beaux and pretty fellows.*
Baldneſs a fourth ſign of this ſort of wit.
Had Julius Cæſar *underſtood this mark, he would not have been aſham'd of his bald pate.*

p. 125. *Another ſort of baldneſs of quite contrary ſignification.*
Sententiouſneſs and pauciloquence a fifth mark of this difference of wit.
Modeſty of words and actions a ſixth mark.
Julius Cæſar's *prudence and foreſight, the cauſe of his great ſucceſs.*

p. 126. *The game at cheſs, a model of the military art.*

A parallel

p. 126. *A parallel between that game and the art of war.*

Encouragement and reward the life of bravery.

p. 127. *An heroick action gives a man, as it were, new birth, and makes him his own father.*

Noble saying of a gallant captain of obscure birth to a grandee.

Six things usually thought necessary to make a man honourable,

1st, Personal merit.

p. 128. *2dly, Riches.*

3dly, Antiquity of family.

4thly, Dignity of employment.

5thly, A surname of good sound, and not ridiculous.

Instance of the force of this seemingly trifling consideration.

6thly, Good equipage, and a graceful person.

p. 129. *Upon the whole, prudence and foresight the fundamental qualities of a great military genius.*

The late duke of Marlborough *an example of a finish'd character in the art of war.*

CHAP. XVI.

Of the difference of wit that is necessary to the office of a KING.

The royal office requires the highest difference of wit that nature can produce.

Galen's *description of the most exalted temperament in nature.*

p. 130. *The principal signs of this perfect wit,*

1st, The hair.

p. 131. *2d, symmetry of features and beauty of person.*

What stature is most adapted to this difference.

3d, Virtue and good conditions, a property of this superior difference.

p. 132. *4thly, A healthful constitution.*

5thly, Long life a great advantage to a prince of such temperament.

Such

p. 133. *Such a temperament or genius not produced in an age.*

Not to be expected, in hereditary princes especially.

Melancholy reflexion on the few great genius's that Europe *has produc'd for two centuries past.*

p. 134. *The whole race of makind appear apace to be dwindling and degenerating.*

SUPPLEMENT.

WE had intended, as our Readers will see by our Conclusion to the preceding Sheets, to have annexed a SECOND PART, calculated more particularly for the Education of the *English* Youth, from their Infancy to Manhood: But being advis'd, that such an Addition, as the Subject was too important to be reduc'd into a very narrow Compass, would lengthen out this Volume beyond the Compass design'd for its easy and portable Conveyance (which the Reader will observe by the Smallness and Neatness of the Character, was a Point we had in View) and being sensible that the Quantity of Matter herein contain'd, is equal to that of most Books in *Duodecimo*, of a greater Number of Sheets, and this being of itself a compleat and independent Piece, we have thought it proper to postpone our Intention to some other Opportunity.

But having, however, a Vacancy of a few Pages, we think we cannot better fill it up, and more suitably to the Subject, than by the following Extract from another *Spanish* Author of Note, *Baltasar Gratian*, translated into *English*, and lately published under the Title of *The Complete Gentleman*, * pointing out how such a one ought to spend his Time, to make his Life Useful to Others, and Happy to Himself. And this we shall do with very small Variation, and that only to avoid the Author's Partiality to his Country, in one or two Instances.

" The wise and complete Man, *says this Author*, is " an Oeconomist of his Time. He divides his Life " into regular distinct Portions; wisely considering " how comprehensive the Span is, how infinite the " Importance of it, and how short the Duration.

* See Chap. xxv. *intitled, The Distribution of the Complete Gentleman's Life.*

" Life.

" Life, however ſhort it is on other Accounts, yet, " if it were not diſtributed into Parts, would be like a " long tedious Road without Lodgings or Accommo- " dation.

" Nature, expos'd to our Eyes for our Inſtruction, " divides her ſelf in the Space of one ſingle Year into four " different Seaſons. And this Variety in the Univerſe " repreſents that Diverſity of Ages, which make up the " Series and Contexture of human Life. The *Spring*, " abounding with tender Flowers, is our *Infancy*; which " is full of nothing but frail Hopes. The *Summer* is " our *Youth*; a tempeſtuous hot Seaſon, wherein the " Paſſions are kept in a violent Ferment and Agitation, " through the perpetual boiling of our Blood. *Autumn*, " crown'd with Fruits, is our *Manhood*; 'tis the ripe " Age of Man, full-grown and mature in his Principles, " Projects and Counſels. Laſt of all is *Winter*; which " is a true Symbol of *Old age*, ſucceeding our Man- " hood. Then every thing in us begins to decay, our " Eyes grow weak, our Hair grey, our Teeth ſhake, " Wrinkles come, and the Blood's chill'd: The whole " Man trembles, ready at every Step to fall and tumble " into his Grave.

" This *Diverſity* of Ages and Seaſons in the Courſe of " Nature, the wiſe Man proportionably imitates in the " Courſe and Order of moral Life. The firſt Part of " his reaſonable Years (if I may term them ſo) he em- " ploys in converſing with the *Dead*; the ſecond in " converſing with the *Living*; and the laſt with *himſelf*.

" Let us expound this little Myſtery. I mean then, " that the wiſe Man dedicates the *firſt* Part of his Life " to *Reading*, and this is not ſo properly Buſineſs or " Imployment, as it is a diſpoſing and preparing of " himſelf for it. However this Sort of Study deſerves " its Commendation; for to learn, is the nobleſt Exerciſe " and Operation of the Mind; as Knowledge is the pe- " culiar Perfection that diſtinguiſheth Mankind, and " gives one a Pre-eminence over another. But if a Man " would improve and adorn his Mind to the beſt Advan- " tage by his Reading, he ought to know what Books " are moſt excellent and valuable in their Kind. The

" Way

" Way to attain this uſeful, neceſſary Knowledge is to " converſe with learned Men, and aſſiſt our own diſ- " cerning Faculty with their Judgments and Approba- " tion.

" He begins with the Study of *Languages*, in the firſt " Place with *Latin* and *French*, which are the two " univerſal Tongues, and the Keys of the World at " this Day. He then applies himſelf to *Greek*, to *Spa- " niſh*, *Italian*, *Engliſh* and *Dutch*. This underſtanding " of Languages is highly neceſſary towards our excel- " ling in other Sciences; it enables us to know, to " compare, and to uſe, upon Occaſion, the various " Thoughts, which the fine Genius's of different Coun- " tries have had upon a Subject.

" From Languages he proceeds to *Hiſtory*, with this " Caution, to pick and cull out thoſe that are moſt in- " ſtructive and entertaining at the ſame Time. He " begins with *antient* Hiſtory, and ends with *modern*, " A great many People indeed follow the contrary " Method. But that, methinks, is againſt natural Or- " der, and attended with this Inconvenience; that it " leaves the antient to a great Hazard of not being read " at all, becauſe, on Account of the Diſtance of Time, " 'tis leſs apt to engage our Affections or excite our " Curioſity. However, the moſt eſſential Point is not " to chuſe the moſt florid, but the moſt accurate " Writers, whether in ſacred or prophane Hiſtroy, in " that of our own, or of other Countries. And, to " prevent, as much as poſſible, all Confuſion and For- " getfulneſs, we ſhould range and digeſt the Things " we read into ſome compendious Form, to make " them more portable for the Memory. We ſhould " carefully mark down Times, Epochs, Centuries, " Ages; the Extent of Empires, Kingdoms, Common- " wealths; their Progreſs, Revolutions, Changes and " Declenſions; the Number, Order and Qualities of " the Princes, that have reign'd over thoſe States and " Kingdoms, their Actions Military and Civil. A " Man, I own, ought to have a happy Memory to " retain all this; but a certain Syſtem which he may " form by his Judgment, will be a great Relief and

" Aſſiſt-

" Assistance to the Memory, and supply what is want-
" ing to its Perfection.

" From hence he takes a Turn into the delightful
" Gardens of *Poetry*; not so much to exercise himself
" in the Art, as to gather up the Flowers and Beauties
" of it. The reading of the Poets is not only an ex-
" quisite Pleasure to the Mind, but 'tis moreover of
" infinite Advantage, and in some measure, if not ab-
" solutely, necessary. And tho' a Gentleman be too
" prudent to make Poetry his Business or Profession,
" yet he has not so little of the Poet in him, but he
" can make a Copy of Verses upon Occasion. But let
" that be his *ne plus ultra*. He reads all the *true* Poets,
" that is, all those that have excell'd. Their Works
" are full of judicious Sentences, sublime Thoughts,
" noble Sentiments, elegant Turns, happy Expressions;
" in a Word, of a thousand delicate Strokes and Touches
" of all Kinds, which form, elevate and embellish the
" Understanding. But tho' he esteems all the Masters
" of the Art, and derives Benefit and Improvement
" from them all, yet he has some that are his peculiar
" Favourites, that he more particularly cherishes than
" the rest. Such is *Horace*, for Example, or * *Mar-
" tial*; the one is a constant, perfect Model of true
" Wit, delicate Sense, elegant Choice, exquisite Taste,
" and Excellence in every Respect; the other is un-
" doubtedly the most extraordinary, and will remain
" so, in the Art of cooking up a Thought with the
" most poignant Seasoning and exquisite Relish.

" To *Poetry* he adds the *other* Parts of *liberal, genteel
" Knowledge*, and so gathers up a Treasure of that
" agreeable polite Learning, which gives Lustre and
" Beauty to the most abstruse Sciences.

" From this polite Learning he enters upon *Philosophy*,
" and in the first Place upon *Natural Philosophy*. He
" studies the first Principles of Things, the Structure of
" the Universe, the Contexture of human Bodies, the
" Properties of Beasts, the Virtues of Plants, and the
" Qualities of Metals. But he dwells the longest upon

* Our Author was of *Bilbilis*, the Poet *Martial*'s Country.

" *Ethicks*,

" *Ethicks*, or *Moral Philoſophy*, which is the proper " Food of the Soul, and what perfects her in all the " Virtues and Qualifications of a Gentleman. This " Science is to be collected chiefly out of the Sages and " Philoſophers, who have reduc'd it into Sentences, " Axioms, Emblems, Satires and Fables. He grows " enamour'd of *Seneca*, *Plato*, the ſeven wiſe Men, " *Epictetus*, *Plutarch*, without diſdaining the amuſing " and inſtructive *Æſop*.

" He then applies himſelf to *Coſmography* of *both* " Kinds; he learns to meaſure the Land and the Sea; " to diſtinguiſh Climates, Latitudes, and the four Di- " viſions of the World; the Provinces, Nations, King- " doms and Republicks compriz'd therein. He finds a " double Advantage in this Study; the one is to *know* " all this, and the other is to be able to *diſcourſe* upon " it; that he may not be like a great many ignorant " Perſons, that ſcarce know the Climate they live in. " He then acquires the Knowledge of the celeſtial " Globes, which roll over our Heads; he obſerves their " various Motions, numbers the Stars and Planets, and " acquaints himſelf with their Influences and Effects.

" As to *Aſtrology*, he examines no farther into that, " than Wiſdom allows.

" All theſe Studies terminate in the conſtant reading " the *Holy Scriptures:* For that is undoubtedly the moſt " profitable, the moſt comfortable, the moſt agreeable " and ſatisfactory Reading, both for the Sublimity and " Variety of the Matter contain'd in the ſacred Pages. " King *Alphonſo* the Magnanimous, in all the Multipli- " city of his important Affairs of Peace and War, found " Time to read the whole Bible fourteen Times over, " together with Commentators and Expoſitors.

" This is the Price, at which he purchaſed the glo- " rious Appellation of a Compleat Gentleman. *Moral* " *Philoſophy* makes the *honeſt* Man; *Natural Philoſophy* " the *ingenious* Man; *Hiſtory* the Man of *Experience*; " *Poeſy* the Man of *Wit*; *Rhetorick* the *eloquent* Man; " *polite Learning* ſheds a diffuſive Grace and Ornament " upon *all Kinds* of *Literature*; the *Knowledge of the* " *World* conſtitutes the *intelligent* Man; the Study of

" the

" the *ſacred Pages* forms the *good Man*; but *All* this " muſt go together to make the *perfect, compleat Gen-* " *tleman.*

" The *ſecond* Part of Life he dedicates to the Con- " verſation and Knowledge of the *Living*, and to enjoy " the greater Variety of that Pleaſure, he travels into " different Nations and foreign Countries. This Incli- " nation to travelling is a great Happineſs to him that " undertakes it for the Sake of Improvement, with " the Curioſity of getting a perſonal Information of " Things, provided he has a Capacity for that Purpoſe. " He meets with ſome Fatigue indeed in ſeeking and " ſearching; but then he finds infinite Pleaſure and " Satisfaction in diſcovering and examining all the Cu- " rioſities of the World, and in making his Uſes and " Improvements from them. What a Man does not " ſee, he does not properly know, and can only reliſh " imperfectly. There is a great Difference in this Re- " ſpect between the *Eyes* and the *Imagination.*

" A judicious Traveller has two conſiderable Advan- " tages; the one is, to have a juſter Knowledge of " what relates to foreign Countries, than other People " have; and the other is to reap more Pleaſure from it, " than any other Perſons can poſſibly do. For he that " ſees curious Objects but *once*, has a very different " Senſe of them from him that ſees them *every Day.* " Thoſe Rarities and Wonders are common to the lat- " ter; but in regard to the former they have the " Charm of Novelty, which both excites and gratifies " his Curioſity. When a magnificent Palace is firſt " finiſh'd, it is for a while the Delight of the Owner; " but in a little Time that Pleaſure forſakes him, and is " transfer'd to Strangers.

" The Benefit a Man reaps from travelling is very " obvious. In the firſt Place he brings Home at leaſt " experimental Knowledge, which has always been " eſteem'd by wiſe Men. For this Knowledge unde- " ceives us by the Teſtimony of our own Eyes in re- " gard to the falſe Accounts and Deſcriptions, which " ill-inform'd Writers have given of a Country; and

" con-

" confirms the Fidelity of thoſe Deſcriptions, that are
" made by juſt and accurate Authors.

" As to the Places which he travels to, he generally
" confines himſelf to thoſe that are of greateſt Note;
" as *Spain*, *France*, *England*, *Germany*, *antient Greece*,
" and above all, *Italy*, where he makes his longeſt
" Reſidence. There he views and obſerves at Leiſure
" all the Cities of greateſt Fame, and all that is curious
" and ſingular in each, whether of antient or modern
" Date; the Magnificence of the Churches, the ſump-
" tuous and noble Architecture of the Palaces: There
" he remarks their Wiſdom in Government and Policy,
" the underſtanding of the Inhabitants, the bright
" Genius's and fine Wits amongſt the Nobility and
" People of Literature.

" There are many other Articles of Importance to
" be taken Notice of in one's Travels; one of the
" moſt material is to frequent the Courts of the moſt
" powerful Princes; for they are not inacceſſible to
" Merit.

" There he finds every Thing, which either Art or
" Nature can produce; whatever is moſt rare and cu-
" rious in Gardens, Terraſſes, Fruits, Paintings, Statues,
" Jewels, Cabinets and Libraries. There he converſes
" with the greateſt and ableſt Men in every Way, in
" Politicks, in Letters, in military Skill, in Arts, and
" in Virtue. And when he has judiciouſly examin'd
" and conſider'd all this for his own Improvement, he
" makes a juſt and proper Eſtimate of it, without un-
" dervaluing it on one Hand, or over-rating it on the
" other.

" The *laſt* Portion of Life, which is the beſt, and
" ſhould be the longeſt, he ſpends in converſing with
" *himſelf*; that is, in conſidering, ruminating and me-
" ditating upon all that he has read and ſeen, in order
" to make ſuch an Uſe of it, as becomes his Character
" and Condition. For whatever enters into our Minds
" thro' the Medium of our attentive Senſes, ſettles in
" our Underſtandings, and remains there to be made
" Uſe of and digeſted after our own Way. By this
" Means every ſenſible Thing becomes in ſome Sort

" in

" intellectual, is weigh'd, examin'd, judg'd and deter-
" min'd by the Ballance of our Reaſon. And all the
" Subject-matter of our Reading undergoes the ſame
" Tryal; we revolve, unravel and define it, we make
" a nice and critical Judgment of it, in order to ſepa-
" rate the true from the falſe, and the ſolid from the
" trivial and inſignificant.

" But the Time for theſe wiſe Reflections and Me-
" ditations (as I obſerv'd before) is our full and mature
" Age. Then the Underſtanding being grown more
" independent on the Senſes thro' long Experience, and
" leſs clogg'd and incumber'd by the Neceſſities of the
" Body, which are commonly ſupernumerary in the
" Time of Youth; then, I ſay, the Underſtanding is
" come to its full Vigour and perfect Liberty. Then
" it apprehends and is affected in a very different Man-
" ner from what it was heretofore. Its Maturity
" ſheds its Influence upon all our Thoughts and Senti-
" ments. O the inexpreſſible Happineſs of thinking
" and reflecting in this Manner! To know and to per-
" ceive what Things are proper for our Inſtruction,
" is what our *intelligent* Man may do; but to reflect
" upon them afterwards, and to digeſt 'em well, is the
" *wiſe* Man's Province. To reaſon and philoſophize in
" this efficacious Way, to rectify and undeceive the
" Mind in regard to all Objects whatſoever, is the ſo-
" vereign Point and Perfection of Wiſdom. And this
" Philoſophy chiefly conſiſts in the frequent Medita-
" tion upon our *latter End*; that is the Point in which
" all our Thoughts ſhould centre, in order to dye
" well once for all.

FINIS.